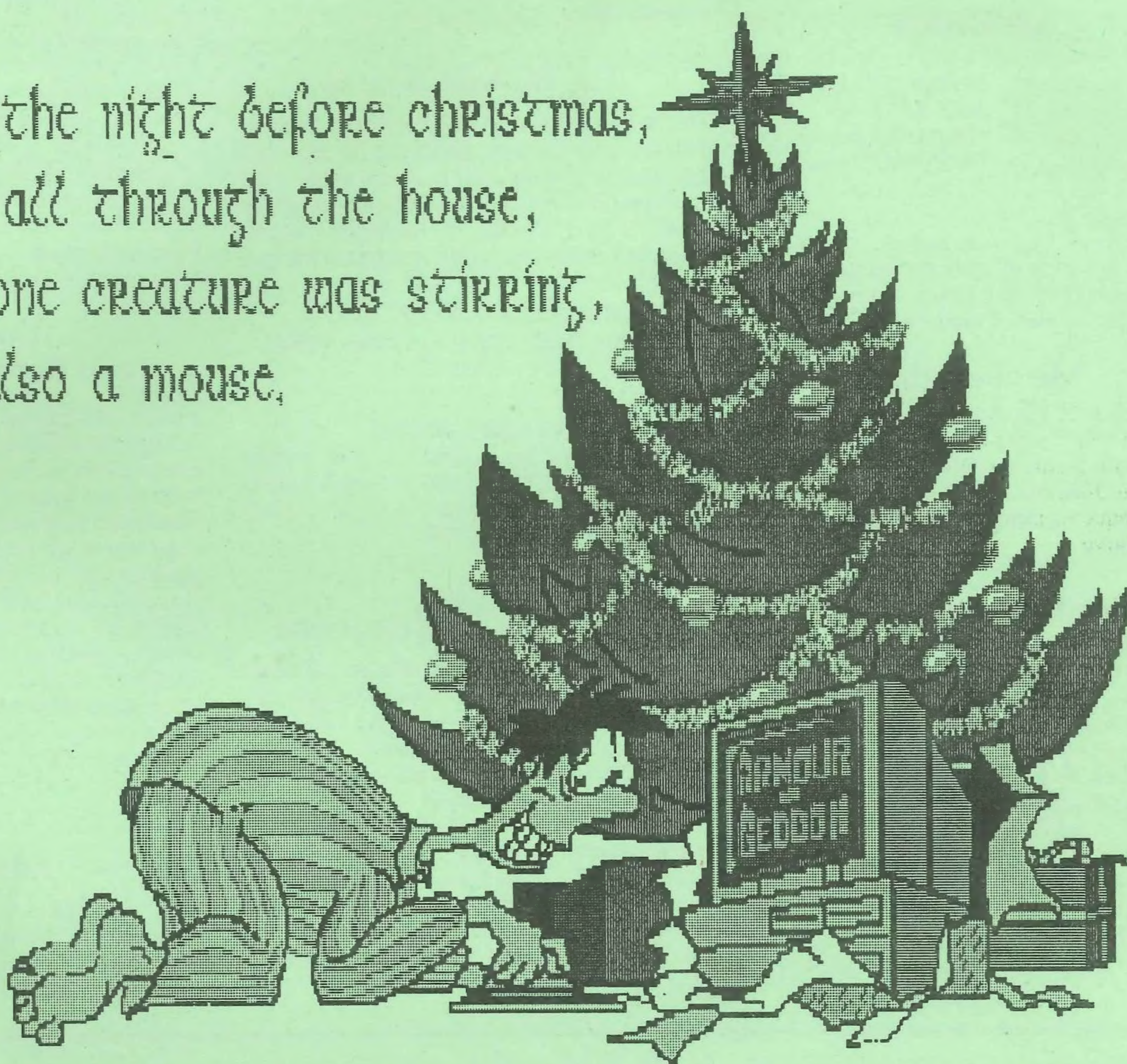


'twas the night before christmas,
when all through the house,
just one creature was stirring,
and also a mouse.



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AMIGA USERS GROUP INC.

P.O. Box 684E Melbourne 3001, Victoria Australia.

Who Are WE?

The Amiga Users Group is a not-for-profit association of people interested in the Amiga computer and related topics. We DO NOT condone software piracy. We can be reached via an answering machine at: **527 1995**

Club Events

Sunday Dec 15 - BURWOOD meeting
Tuesday Dec 17 - ART S.I.G.
Wednesday Dec 18 - NWAUG meeting
Sunday Jan 19 - BURWOOD meeting

An entry fee of \$1 is charged by the groups to cover the cost of hall rental and light refreshments. Meeting times and directions are listed in the rear of the Journal.

Membership

Membership of the Amiga Users Group is available for an annual fee of \$25. Membership forms are available from AUG and in this Journal. Send completed form with a cheque or money order for \$25 to the address above.

Member's Discounts

AUG negotiates discounts for its members on hardware, software and books. Currently, Technical Books in Swanston Street in the city offer AUG members 10% discount on computer related books, as does McGills in Elizabeth Street. Kev's Computer Shops in Coburg and Prahran offer 10% off RR items. MVB Croydon, Computer Magic Moonee Ponds and Software Buyers Service offer good deals while Maxwells of Abbotsford offer 10% off all software.

The Amiga Users Group Committee

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Ass. Coordinator	- Neville Sleep	546 0633
Secretary	- Chris Tremelling	527 2594
Membership	- Peter Barton	850 9250
Meeting Chair	- Arnie Robbins	808 0551
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Treasurer/P.D.	- Mark Barnes	807 7036

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Ass. Co-ordinator	- Tony Prowse	379 7960
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Treasurer/Mem	- Paul Pritsis	350 3601
Book Library	- Darrel Butcher	439 6283
Disc Library	- Alan Cheng	380 5588

SEAUG Committee

Co-ordinator	- Russell Porteous	585 0202
Asst. Co-ord	- Len Sutcliffe	776 5419

Club Services

Amiga Central	- Gary Gajic (7pm - 9pm)	376 4378
A-link 1	- Bohden Ferens	792 1138
Workbench	- Ashley Schwall-Kearney	754 5445

Disk and Book Library

AUG has an extensive collection of Amiga Related Books, Magazines and Tapes. Disks from our Public Domain library are available for \$2 each on your own disks or for \$6 each on AUG supplied disks, which includes postage. Details of latest releases are printed in this journal and a catalog disk is available.

The Bulletin Boards

The AUG operates two bulletin boards devoted to the Amiga. Both can be accessed 24 hours a day with a modem and appropriate communications software using the following speeds: Parameters should be set to 8 data bits, 1 stop bit and no parity.

AmigaLink-I: 792-3918

v21. - 300 v22. - 1200 v22bis. -2400
v23. - 1200/75

Amiga Central

376-3887	v22bis. - 2400	v32. - 9600
376-7375	v22bis. - 2400	v32. - 9600
376-6385	v21 - 300	v22. - 1200
	v22bis. - 2400	

Back Issues of Workbench

All back issues of Amiga Workbench are now available, for \$2 each including postage. Back issues are also available at meetings.

Production Credits

This month's Journal was produced by Jim Berry, Lester McClure Alex McCooke & Ashley Schwall-Kearney while nikolai still has his finger in the pie. Equipment and software used :- Amiga A500, and A2000 Pagestream2.1, and a Brother Laser printer. Workbench is published by The Amiga Users Group Inc. and printed by Kwik Kopy Printing Highett.

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Advertising

The Amiga Users Group accepts commercial advertising in Amiga Workbench subject to available space. Contact the Editor for rates and conditions.

Amiga Help-Network

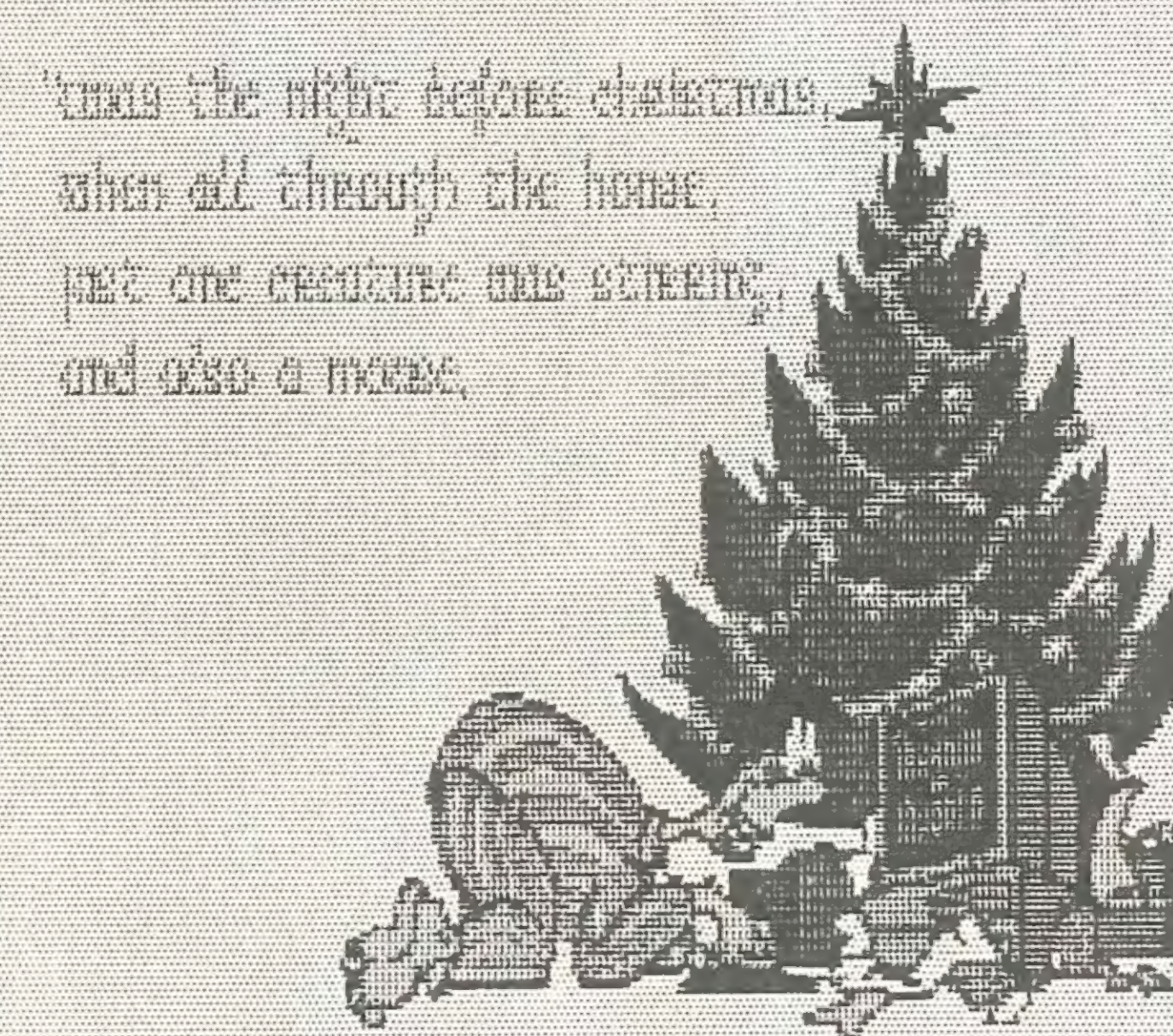
The following is a list of AUG members who have volunteered to share their knowledge/experiences with others. If you also want to help and have your name listed here please contact Lester McClure - 803 5664. The names are not listed in any order or priority. Please **keep contacts to reasonable hours** (6 to 9 pm unless otherwise mentioned) and remember one very important basis of this service - they are volunteers.

Introduction to the Amiga / Prowrite	Rudy Kohut	- 807 3911
Amiga Basic (Advanced)	John Elston	- 375 4142
Amiga Basic, A/C Basic	Alan Garner	- 879 2683
C (Introductory), Professional Page	Mal Woods	- 888 8129
C (Advanced)-AZTEC	Andrew Gelme	- 645 1744
C (Advanced)-LATTICE, TeX	Eric Salter	- 853 8857
Amiga Art, Music	Norm Christian	- 798 6552
Music, Audio Sampling, MIDI	Neil Rutledge	- 578 5724
Beginners Help Line	Russ Lorback	- 802 9333
Superbase, Bridgeboard	George Wahr	- 376 6180
Amiga; A/C & AMOS Basics	Bill Jordan	- 417 3521
A1000	Lester McClure	- 803 5664
Graphic Arts - DPaint, Sculpt, etc	Joe Santamaria	- 383 3509

AMIGA

Workbench

Number 67 December 1991



Cover illustration by Rod Clifton

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Equipment

Amiga 500
Amiga 2000
Brother Laser printer

Software

Pagestream 2.1

Printers

Kwik-Kopy Highett

AUG People.....

This Month's cover illustration is another by Rod Clifton. We are not the only ones who think his work is good enough to publish; a New Zealand user group printed one of Rod's illustrations but didn't see fit to give him any credit. I've already sent them a note asking them to correct the omission.

Ian Rule is the newest member of the Workbench group, he helped out with the November 'Pack & Post' night (where we put 1,000 copies of Workbench in envelopes and stick address labels on them). Norm Christian is also giving a hand with the magazine. Prompted by the number of spelling and typing errors in last months edition (mostly mine) he is proof-reading the copy before it is sent to the printer. Thanks to them and all the others who help produce this magazine. If you would like to help (no experience necessary), we give on the job training) give me a call or leave a message on the BBS. Some people have had difficulty finding me on the BBS. I am listed there as A Schwall-Kearney because my complete name is too long. If that doesn't work my phone number is listed on the opposite page. If THAT doesn't work we'll reinstate the pigeon post.

The January '92 edition of Workbench will be a disk issue. If you have anything that would be suitable give Russell Porteous a call on 585 0202.

Many AUG members are disappointed to hear that Software Buyer Service will be closing down later this month. Arnie Robbins, through SBS, has played a significant part in reducing the cost of Software in Australia. The fact that he is closing down is proof that he achieved his goal of reducing prices generally, along with the recession his policy has been so successful he has squeezed himself out of the market. Arnie has no immediate plans but we wish him the best of luck.

After a lengthy illness and a bout in hospital Ben Beekman has returned to the Amiga scene. Ben has been a long time Amiga enthusiast and AUG supporter. Ben's Fastmode Education Centre is offering AUG members a better than 50% discount on the prices of its courses. He will create any course for a minimum of 5 people. Ben is also offering his premises and the equipment in it as a venue for Special Interest Group meetings.

Ashley

The BIG Picture

Projecting - My View

by Simon Shead

Recently, the AUG held a Special General Meeting to discuss the purchase of a display device capable of meeting our needs as a group of Amiga enthusiasts. The outcome was that we decided we needed something, but were unable to determine what we needed

It has been calculated that in about two years, we would have spent the same amount on hiring equipment as we would have spent on purchasing the device. The hired equipment was only of benefit to those who attend the Burwood meeting. We decided instead to raise funds to put towards the purchase of such a device. Figures quoted were in the range of \$6000 to \$10,000. Many of the alternatives were, in my opinion, lacking in the necessary features that are essential for our requirements.

Most of us chose the Amiga because of its superior graphics & animation capability. It was designed from day one to be Video Compatible. That is why the Amiga is so big in video, and does it better than anyone else. To do the same thing on other computers costs THOUSANDS. Soon we will have the new chipset and Workbench 2 with its better graphics modes, and we are also entering the 24 bit graphics era.

The proposal at this stage is that the unit would be available to all the groups associated with AUG - i.e. Burwood, NWAUG, SEAUG, AMOS/AREXX groups, ART SIG etc. It may even be hired out to other groups, offsetting the purchase price further. It would be transported by courier to a pick-up point, where the group concerned would be responsible for its use, and forwarding by courier to the next group. The "pick-up" point could either be directly to/from the meeting place, a 'responsible person' (e.g. committee member's house), or a place which is local and open during business hours to receive couriers (e.g. Computer Shop). The important thing is that the unit MUST be available for the meetings, come hell or high water. It is no

good depending on one person to get it from A-B-C-D... they get sick, held up at work, come late, etc. A courier service is the safest option here. Regardless of the size/value/weight of the device, it is possible to get a courier, and insurance on the item. They are generally reliable and safe.

So what does the club need? If we are just showing text, static graphs & pie charts, etc, a data screen would be OK (if you're only doing that kind of thing, go buy an IBM!) But we are continually showing demos, games, music, drawing, paint programs, graphics, animation, etc. etc. Even the Workbench/Shell environment has high requirements. When we are showing animations, we are not necessarily showing the Channel 9 station logo, or a Vista animation flying along a rendered fractal valley. Animation means "not static", or moving. It can be simple things like moving a mouse across the screen, or watching a display cursor move across an Audio Engineer waveform, as was seen in a recent meeting.

The display device must be - Transportable. Durable. Bright enough for all venues. Produce a large enough display area for comfortable viewing by all

Capable of displaying animation (no visible lag when objects move on-screen).

Capable of accurate reproduction of all colours (up to 16.7 million).

High resolution to show correct image detail (readability) and capable of showing the FULL display area, especially vertically (including overscan)

Capable of supporting all Amiga display modes i.e. rates of 15kHz standard, 31kHz with display enhancer, (allowing it to be driven from a standard or fully optioned machine with display devices)

Easily set up and adjusted including registration and focus. It should also have Audio capability & Video input

I have already made up my mind about which unit is the best solution, and I have seen most if not all of the alternatives. I won't keep you guessing, my solution is a triple-gun projection unit such as the SONY unit that has been employed from time to time at NWAUG and a similar unit in use at Burwood on a regular basis. In fairness, I will outline the major options in some detail. The prices included are very approximate.

DATA DISPLAY UNITS

These type of units range from black & white to 4000 colour units. They usually work on the basis of an LCD screen (3 screens in the colour models) switching on and off to block/pass light from an overhead projector. LCD's are not very fast, and typically have a refresh rate (time to switch between ON and OFF) of about half a second. Video, on the other hand, refreshes at 25 frames per second. Some of the newer technology devices, which are expensive and rare, use a twisted crystal arrangement, which is faster, but still slow compared with video. Lag is very apparent on these units when objects move on screen. The resolutions vary - from a couple of hundred pixels to 640 pixels horizontally. None do overscan. The display area is usually 400 - 480 vertical lines, so the bottom part of your PAL screen cannot be shown. The majority of units will only handle a small number of colours (16 - 256), as they are designed to suit IBM units. Any colour that is sent to the unit that is not an "IBM colour" will be approximated to one of those colours, so the displayed colour is not always accurate. These units are driven by VGA outputs, so a display enhancer or A3000 is MANDATORY to drive it. All these units require an additional overhead projector, and the output brightness and size is dependent on the projectors performance. The display units themselves are relatively small and transportable, however you have to consider the further purchase or supply of a powerful projector and its added size.

	DATA DISPLAY UNITS	SINGLE GUN LCD PROJECTOR	MULTI-MONITOR SYSTEM	LARGE-MONITOR SYSTEM	THREE-GUN PROJECTOR
Price	Unit = \$6,000 - \$12,000 Projector = \$800 - \$4000 Audio = \$500	\$7,000 - \$8,000	Monitors - \$5,000 VDA/ADA - \$2,500	\$8,000 - \$10,000	\$10,000
Comprises	Display Unit, power supply, cables, carry case	Projector, power supply	Too Much!	Everything	Single self-contained unit. Connects to 240V. All cables.
Necessary extras	Overhead projector, Amiga with VGA output (Display enhancer or Amiga 3000)	None	Monitor stands/tables Lots of gaffer tape to secure cables.	Fork Lift truck	None. Recommend a Road Case.
Number of Colours	2 - 4000	Unlimited	Unlimited	Unlimited	Unlimited
Resolution	LCD Matrix up to 640 x 480	LCD Matrix approx 320 x 512 in TV safe area (underscan area). Supports Overscan & PAL.	Correct Amiga Resolution	Excellent, correct Amiga resolution	Excellent. Video inputs 650 TV lines. RGB input 1100 TV lines. Horizontal - 1500 pixels
Transportability	Unit + Projector = Good.	Size is quite manageable. Road case required. Weight acceptable.	Impossible on regular basis	Very Poor.	Good
Durability	unit = good (solid state) projector = poor (glass & lamps)	Quite sturdy. Fragile lenses and globes, designed to be portable.	???	Quite reasonable	Excellent
Luminance	Determined by overhead projector used. Adequate in dark room. Luminance suffers as screen size is increased.	Adequate for lounge room, poor in larger areas.	Good for immediate viewing area	Quite good.	Excellent - 300 lumens. 3X5.5" high-luminance tubes with sealed coolant. Capable of projecting a large screen image in daylight.
Display AREA	200 - 640 Hor. 400 - 480 Vert.	320 x 512 plus overscan	>640 x 512 plus overscan	640 x 512 plus overscan	1500 x 512 pixels, plus overscan!
Display SIZE	1.5m diagonal with high power projector	Up to 2m diagonal	14"	34"	72" to 200" diagonally, selectable. Factory set to 100"
Animation	very poor	Reasonable for video. Suffers slightly with computer input	yes, excellent	Yes, excellent.	Yes, excellent. TV scan rates.
Display Modes	VGA 31kHz	VGA, RGB, Composite video	all Amiga modes	Standard Amiga modes only. Composite, Y/C inputs.	All Amiga modes, VGA, Composite, Y/C, RGB, PAL/SECAM/NTSC. Multisync (supports Productivity & Super HiRes) - Horizontal - 15kHz - 36kHz Vertical - 40Hz - 150Hz
Setup Adjustments	Place on overhead projector, focus and angle lenses.	Rotate focus ring. Internal adjustments available for initial setup	Factory	Factory	Adjust vertical and horizontal convergence for R & B guns. (4 knobs.) Test pattern inbuilt. Takes approx 10 seconds.
Audio Compatibility	None. Needs Amp & speakers.	Internal Amp/Speaker	yes, (but a bit tinny sounding)	Yes, excellent. Stereo, Surround,	Yes, inbuilt speakers & amp.
Video Compatibility	None.	Composite & some models RGB.	Yes, composite, Y/C	Yes, Composite, RGB, Y/C	Yes, Composite, Y/C, RGB (x2).

"SHARP" TYPE SINGLE GUN LCD PROJECTOR

These units are normally designed for home use, displaying the TV/VCR output onto a wall or screen. They work by generating a picture on a colour LCD screen and projecting a bright light through it. Results are very acceptable for watching TV. It does however suffer from some lag and resolution is poor (320 pixels horizontal.) They are not designed for showing data, although some have computer inputs. This capability is limited by the small number of pixels in the internal LCD screen. This type of unit will generate acceptable results in some situations - a good analogy is to compare the output from this unit with a lo-res 320x512 picture output from the Amiga through an RF modulator and viewed on a large TV set. Text is difficult to read, and prolonged viewing is difficult.

MULTI-MONITOR SYSTEM

This type of solution was one of the first considered. It would entail having an RGB distribution amplifier system, power supply, audio distribution system, LOTS of cable (RGB/VIDEO/AUDIO), and sufficient RGB monitors to spread around the room. Using the example of 14" 1084 monitors, with say, 15 people per monitor, we would require 10 - 15 monitors for the Burwood meeting. This would result in a LOT of gear, and a Video Engineer to put it all together. And it isn't terribly portable.

LARGE-MONITOR SYSTEM

Recently there have been a number of large-screen TV/monitors introduced on the market. I am referring specifically to the large 34" variety. One of these large SONY beasts was taken to a NWAUG once...just once. They are big and heavy. The picture was excellent, the sound was excellent, and so was the stay in hospital after the hernia operation... Three people had difficulty moving this unit, and that was before the stairs. Definitely not portable. This size unit would satisfy the requirements of a small group (SEAUG, maybe NWAUG, several would be needed for Burwood.

THREE-GUN PROJECTOR

This is my pick of the crop. Specifically I am talking about the SONY VPH-1031QM Multiscan Video Graphic Projector. It has everything we need, now and in the foreseeable future. It compares favourably price-wise with the other units. It is essentially a big RGB multisync monitor, but with very big colour guns! The only downside of this unit is its weight, although it isn't overly heavy. I have carried this type of unit single-handedly on many occasions. The difficulty in carrying it is because of its size it is sometimes difficult to get a comfortable hold. However with a purpose-built carry case, this unit could be easily and comfortably transported by one person. It is a self-contained unit with one video line input, one video line output, two RGB inputs, 14-pin multicore connector, inbuilt amplifier and speakers, quad-decoder circuit (PAL / NTSC / SECAM / NTSC 4.43), Multisync capable, Analog/Digital RGB selectable, Extremely High Resolution, and Superimpose facility. This unit is designed to be transported. It now weighs less due to replacing some components with lightweight plastics, however its strength is assured by its steel chassis. It is composed of multiple PCB's and power supply, and three lens assemblies which are encased inside the steel frame. I know of one unit which toured Victoria with a band's equipment for three months, without a transport case, and despite the case being a little crushed and damaged, worked faultlessly. A carry case from SONY is an optional extra for this unit. I propose a custom transport case consisting of an aluminium "AEROLYTE" type case with foam padding, carry handles and castors. This would enable the unit to be wheeled like the suitcases you see at Airports. It would then be a simple matter to remove the top half of the case when the unit is ready to be used.

I should say somewhere here that I don't have any affiliation with SONY Corp. There are similar units made by BARCO and AMPEX, I think. There may be others also. I do not know if they are multisync.

The multi-solution is not even worth considering (that is where you

buy one device for text, one for graphics.) This "solution" is not effective and will cost more than what I propose. It is also difficult to use such a system - i.e. you have to power down and re-connect the graphics device when you are done with showing text. What do you do if you are showing text and graphics at once? Think about it - why isn't there an LCD display for the Amiga sitting on your desk at home. It just isn't possible for the technology at this time to produce anything comparable to the Cathode Ray Tube. CRT's are heavier, but their results are far and above their counterparts.

If you are going to do it, do it right!

Don't make the mistake of skimping on a couple of thousand dollars and only getting a quarter of the results. If we make the right decision, this project will prove to be self sufficient; the money would have been spent on equipment hire over two years anyway. And at the end of it, we will still have something tangible and valuable. If there is something else at that time, we can trade up to it.

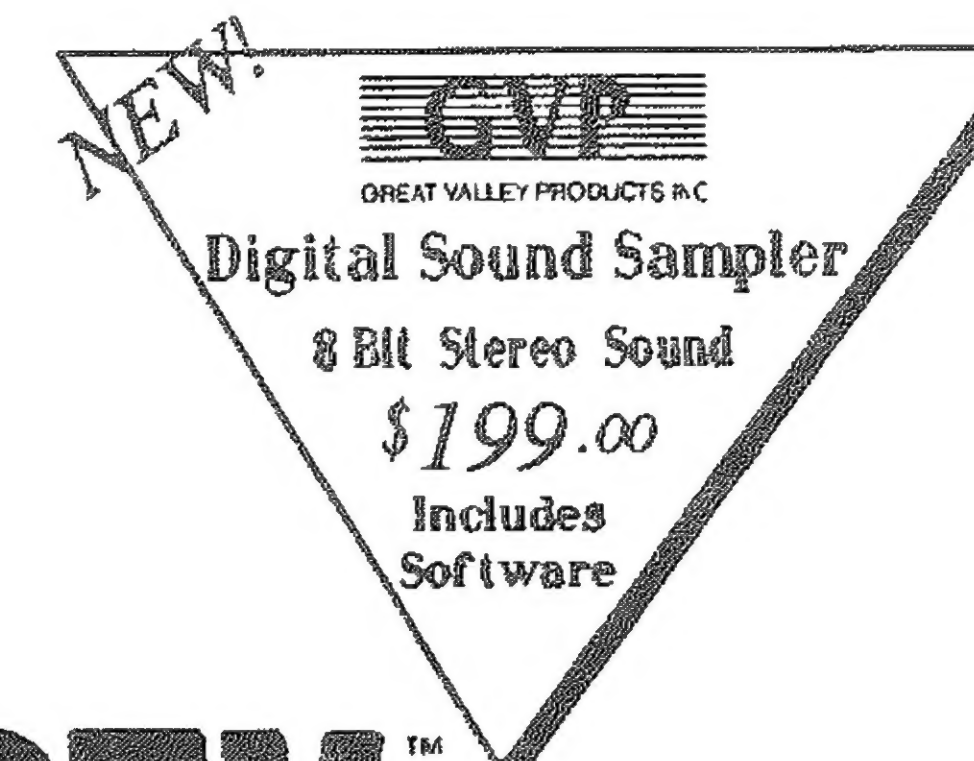
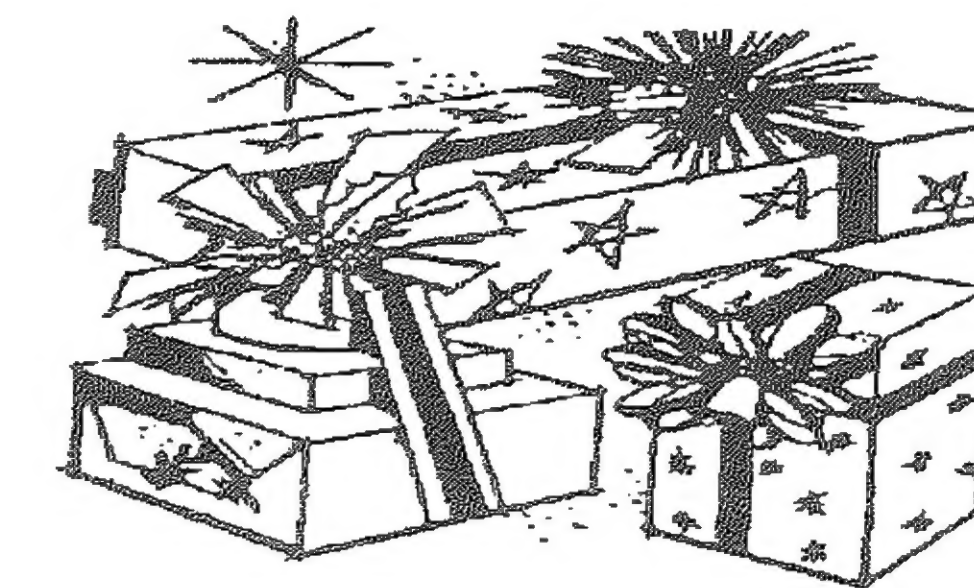
Do it right the first time!

We are talking about a lot of money, so we cannot afford to make a mistake by purchasing inferior equipment. I therefore recommend a triple-gun projection unit, such as the SONY VPH-1031QM Multiscan Projector (or similar). This unit will satisfy all our present requirements and will continue to do so for some time. I don't think the technology is in danger of being superseded for quite a few years yet - the closest threat is from the HDTV standard (which, by the way, no-one can agree on, so it is still on the drawing boards.) And if it does come, the current Amiga will not be able to support it anyway. It would require replacing the entire chipset, changing system clocks etc., and then you will have a new machine entirely!

The views expressed here are Simon's, not necessarily those of the Projector Committee. George Wahr for one, promises he will have something to say in our next issue. If you have something to add to the debate, send it in - ed.



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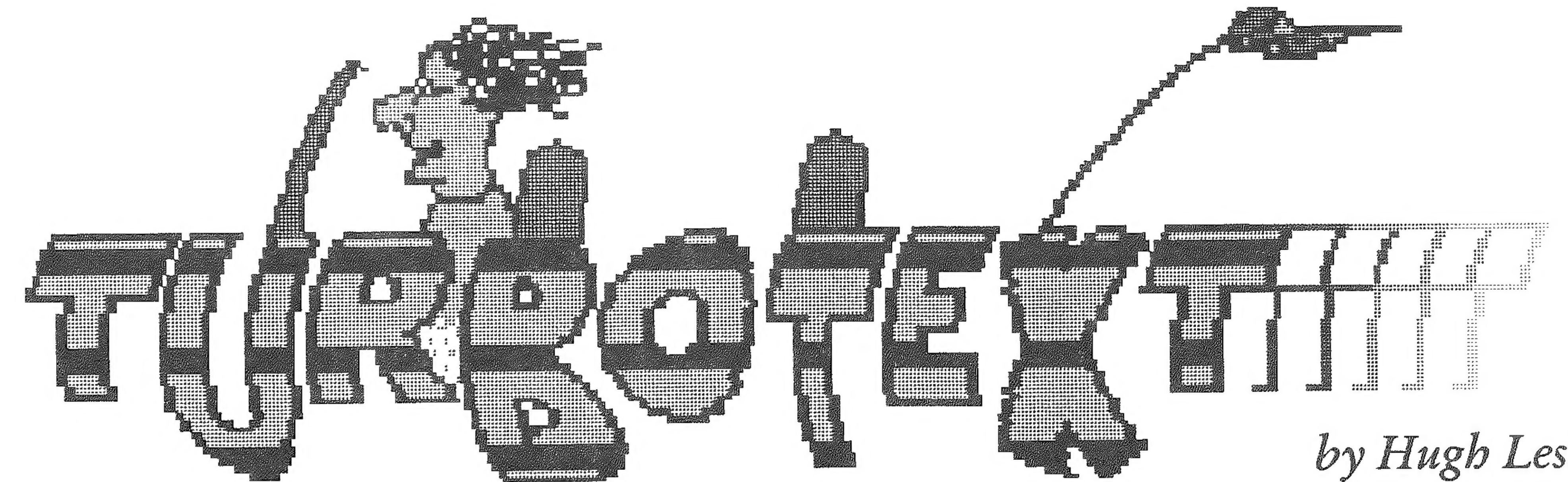
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I have used a number of text editors on the Amiga for doing a variety of tasks - mostly for programming, but also for editing batch files, startup sequences and anything else which is line oriented. I have never really been happy with any of them, from Ed through a few of the public domain ones to LSE. LSE is the Lattice Screen Editor which comes as part of the SAS C compiler package and is not a joy to use - it doesn't even have a file requester (although I managed to rig one up using its AREXX port). I have continued to use it despite its faults because it does work well with the whole SAS C environment. Recently however, I decided that I was going to get myself a good text editor and so I had a look at Cygnus ED which has been the king of the hill for a long time, and a more recent entrant to the field - TurboText. From the fact that this is a TurboText review you will have deduced that I bought TurboText!

TurboText is the sort of software that as soon as you start to use it you get the feeling that it has been well designed and written. Everything about it is slick, logical to use and very solid. It is completely up to date with the system software and has been written from the ground up to work under WB 2.0 even though it is fully compatible with 1.3 etc. This does mean that there are a couple of features that are available under 2.0 that are not available under 1.3. I will get to these later.

TurboText does what it sets out to do very well. It is designed for editing text and is fast and easy to use. It has a very fast variable speed scroll and does everything you would expect of a text editor such as cut and paste, delete etc. You can open as many documents in different

windows as memory will allow. You can look at more than one part of the same file at the same time. There is a fast search and replace function and some extras like being able to mark a vertical column.

Once you get past the standard features of any text editor, TurboText really starts to shine. It has some special programmers features such as a fully featured programmers calculator that runs as a separate task so you can keep on editing while you use it. It also has a hex editing window that displays the hex format of the file you are editing. It has a feature called "folds" that enable you to mark a section of text such as a procedure in a program and collapse it down so that only the first line shows. This is great for making a program easy to read. You can easily collapse and uncollapse a fold with a simple keyboard command.

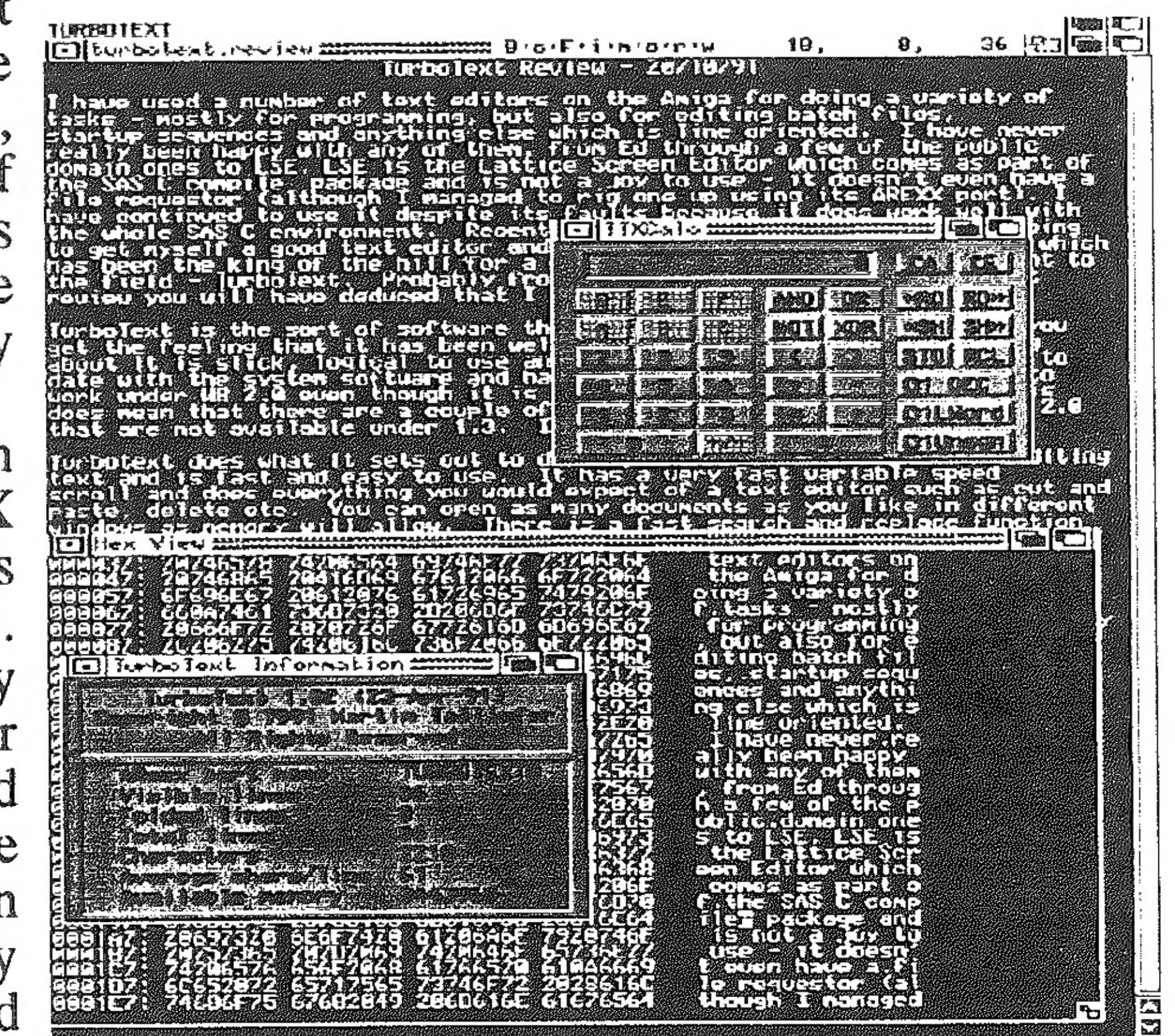
Turbotext is really configurable. Every key can be changed to do something different as well as all the menus. This means that (if you want to!) you can change the whole editor and make it look like something else. The package comes with a number of configuration files that make it look like CygnusED, Wordstar, TEXed or a number of others. You can use this feature to make TurboText work exactly as you want.

TurboText comes with a fully featured AREXX interface and it uses this feature for its macros. You can access every feature of the editor using AREXX and thereby automate file conversion etc. You can "program" macros by turning on the record

function, entering keyboard and menu commands and then turning off the record function. This macro can be used as is, or saved to disk as an AREXX program!

Under Workbench 2.0 the program enables you to use some extra features. The first of these is called an application window. This feature allows you to drag a file icon over the editor window and upon releasing it have the file automatically loaded in. Another is the ability to open on "Public Screens". This 2.0 facility allows a program to open a screen and declare it to be "Public", allowing other programs to open windows on it without causing pyrotechnics!

Overall I am very pleased with the program; the only improvement I can suggest is in the area of 'undoing' changes. Cygnus ED allows you to undo to the limit of available memory. That is it "remembers" everything you have cut or deleted and you can restore it at any time. TurboText only has an undelete for the last thing it deleted. Aside from this small gripe I believe that TurboText is the new "King of the Hill" in Text Editors.



Title Graphic by Mathew McDonagh

HARD DRIVING

A590 Hard Disk Drive

by Duncan Turner

The A590 is a hard disk drive for Amiga 500 computers. Designed to fit onto the expansion slot on the left side of the 500, it is shaped like a rectangular box and perfectly matches to machines decor and design. A hard disk primarily gives you more space to store programs and more file access speed. Word processors will spell check quicker, all your files will sit on the one volume (hopefully easier to get to and find), and your Amiga will boot like lightning!

A hard disk is different to the 3.5 inch floppy drive that accompanies all Amigas. The data is recorded on rigid metal platters that are sealed in an air-tight case. You can't remove it like a floppy diskette - hence the name "fixed disk" commonly associated with a hard disk.

You can buy many third party hard disk drives for the A500 but Commodore's A590 is an excellent choice and is budget priced. There is only one model which consists of a 20 Megabyte drive, Autoboot ROM's so you can boot up directly from your hard drive, (Older drives required you to boot from a floppy then move over to the hard drive - much slower), a SCSI (Small Computer Standard Interface) controller which runs the drive and enables you to attach a further seven SCSI devices (such as more hard disks, tape drives and CD ROM), sockets for 512Kb, 1Mb or 2Mb of fast RAM to be added, and direct memory access (DMA) which gives your hard drive the fastest possible operation.

Packaged in foam and cardboard the A590 comes with the hard drive and the SCSI interface, etc. in the rectangular box, a power supply, a grounding clip (to prevent static electricity from damaging the computer or disk), a setup disk and a

manual. The hard disk comes pre-formatted with Workbench 1.3 on it. Installation is quite simple and straightforward if you follow the step by step manual. Once installed you leave the drive's power supply on. The hard disk will turn itself off when you turn the 500's power off.

When you turn your computer on the A590 boots up in unison and makes a sound similar to a space ship at lift off. Immediately you notice the remarkable speed difference to floppy disks. Workbench is loaded almost instantly. The A590 is not as fast as some other hard drives, however for anyone used to the speed of floppies it is more than adequate. You will notice the noise. As the hard disk constantly rotates to achieve faster access, it needs a fan to keep it cool. The fan on the A590 is rather noisy, and A500 owners will take a while to adapt to the noise their Amy is

making. I am unable to review the RAM expansion or SCSI port features as I have not had the need or the money to upgrade that far, but the possibility is there, one of the great features of this device.

The A590 is an excellent choice for a hard drive expansion for the A500. It is low priced, operates well and greatly improves speed and storage. For many people 20Mb is adequate provided you are well organised and don't want to store massive graphics and music files. I use my word processor, DTP, music and communication programs and still have about 10Mb left. For those of you who want more storage you'll have to buy another hard drive such as the GVP Series II. For myself, if I need more storage I'll simply buy another hard drive and attach it to the SCSI port on the back of my A590.

So rush off to your Amiga dealer and see how an A590 hard drive can transform your life. ■

Fitting a Hard Disk to your Amiga

by John Barlow

Many people who run their Amigas from floppy disks are amazed at how much faster things load from a hard disk. Even the normal Workbench window loads noticeably quicker from a hard disk, even a hard disk that is not considered to be particularly fast.

The answer to this is the speed that the disk can access data and feed it to the computer. On a floppy disk the data is written on the top and

bottom surface of the disk in 80 concentric circles or tracks. To access the data the computer must first find out where on the disk the information is, by looking in a directory, then move the Read/Write head to the correct track, then wait until the appropriate part of the disk spins by. A floppy disk spins at 300 rpm so if the piece of information has just passed the head, the computer must wait until the disk

completes a full revolution before it can read that piece of information from the disk.

A hard disk on the other hand spins at about 3,000 rpm and can have many surfaces (imagine a stack of disks one on top of another, with read/write heads for the top and bottom of each disk). It is usual for hard disks to have at least four surfaces and not uncommon for them to have more than ten surfaces. Because the disks do not have to be removed the data can be placed on the disk more precisely because the alignment is never altered. Higher rotational speed, coupled with the data being stored closer together and many more heads reading simultaneously cause the hard disk to be able to read and write much more quickly than a floppy disk.

I have an Amiga 2000 with a Commodore 2090a hard disk controller and an AT Bridge Board fitted. The 2090a is not the fastest hard disk controller around. It is very convenient for someone who would like to fit a cheap hard disk system to their machine. The Bridge Board can also be used as a cheap

way of fitting a hard disk as well, but for anyone considering buying a Bridge Board I would not recommend it. If you must have IBM compatibility buy a cheap IBM clone and hook it to your Amiga with a serial cable.

The cheapest and easiest hard disks to get are the IBM compatible ST506 disks. The 2090a controller can run two of these as can an ST506 controller connected through a Bridge Board. A good bargain hunter should be able to get hold of a 2090a for a couple of hundred dollars or an ST506 controller, for use through the Bridge Board, for around a hundred dollars. New ST506 disk drives can be bought for around three hundred dollars for twenty to forty megabytes. Larger versions of 200 megabytes or more can cost over \$1000. The more adventurous can get great bargains at computer swap meets, from computer repossession houses and possibly just second hand from a computer dealer. Second hand ST506 drives can often be picked up for around one hundred dollars.

The other type of hard disk that is

generally fitted to the Amiga is known as a SCSI hard disk. The 2090a can handle up to seven of these devices as well as the two ST506 drives. Other SCSI controllers are available, some with memory expansion, some with accelerators and some with the lot built in. The prices for these controllers start at around three hundred dollars. These units can usually handle several SCSI drives but usually can't handle ST506 drives.

Owners of Amiga 500s have less choice for do-it-yourself hard drive systems but there are many controller/drive combinations available at reasonable prices (though not as cheap as a 2090a and a second hand ST506). It should be possible with with a lot of the external systems for the 500 to add additional drives later on so check on what the requirements are before you buy one.

To give an idea of the relative speeds of different types of hard disks and also the fast filing system that can be easily installed onto a hard disk, I have put together a summary of several different setups on the 2090a board compared to a floppy drive (*see sidebar*). The program used for the test was Disk Speed Test 1.0. (Version 3.1 is available on Fish Disk #329).

As you can see the hard disk is much faster than the floppy disk, and the addition of the Fast Filing system adds a lot more speed. Unfortunately although I still have a hard disk running off the Bridge Board I do not have any space allocated for the Amiga side so I could not run the test on it.

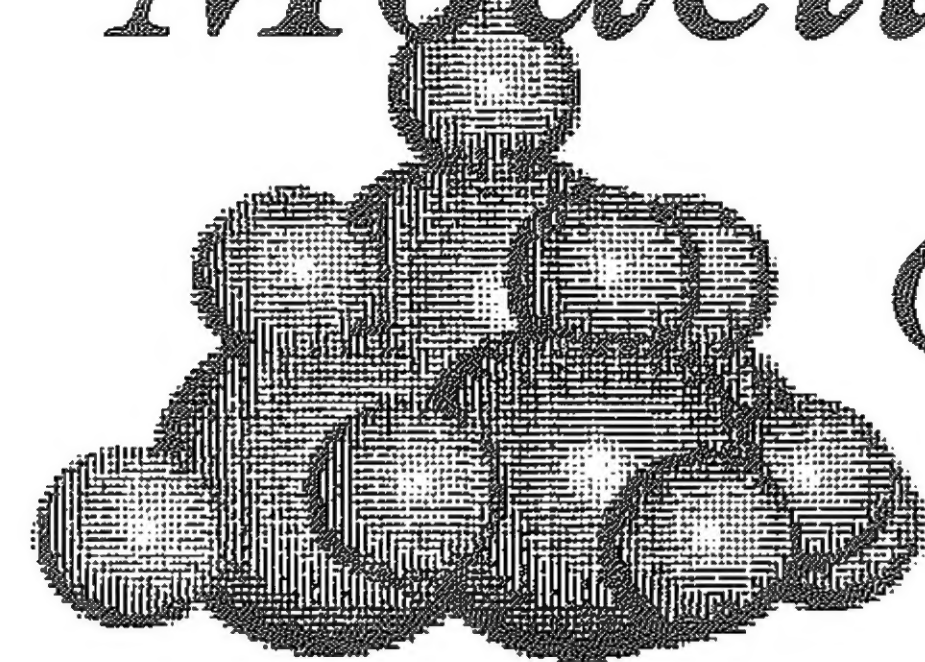
I hope this article has got a few people without hard disks thinking. If you feel the need for speed, then go out and buy one. If you have lots of money get a complete system. If you would like to get a hard disk on the cheap and are prepared for a little frustration buy a 2090a or similar and then buy a second hand drive of the correct type and required size. If you are really adventurous and would like to learn a lot about your machine, try doing it yourself from the manuals. Provided proper care is taken in handling and installing the boards there is not a lot of damage that can be done. Go for it.

illustrations by Mathew McDonagh

COMPARISON OF DISK SPEEDS

	Directory Scan (files/sec)	Best Read Speed (bytes/sec)	Best Write Speed (bytes/sec)
Normal Floppy Drive	6	12,443	3,428
ST506 Drive (normal filing system)	17	46,876	17,527
ST506 Drive (Fast Filing system)	99	217,818	211,731
SCSI Drive (normal filing system)	27	60,282	23,590
SCSI Drive (Fast Filing system)	118	571,486	564,617

Modelling Molecules



Chemesthetics v 2.06

by Rob Pemberton

THIS PROGRAM draws molecules using the calotte model; the resultant screen can then be saved as an IFF graphic file. The displays contain a certain aesthetic attitude. Even extremely poisonous molecules like nicotine or dioxin can look appealing. (A calotte model resembles a group of connected billiard balls of different sizes and colours; the name comes from a certain style of skull cap worn by R.C. priests). From Fish Disk #536.

Installation of the program is simple - just copy the Arp. and the req. libraries into your LIBS: drawer. The author has supplied an install:libs program that will automate the transfer.

The basis of molecules is atoms. A water molecule for example consists of one oxygen and two hydrogen atoms. The program is given the position of each atom and the position of the light source. It is also given the twist and reflection of the molecule. From this, a calotte model of the molecule is calculated. Entered data may be saved and restored for later use, and the completed picture can then be saved.

Select 'Molecule data' from the input menu, a window will open where you can enter data. To do this switch the edit gadget to ADD. The cursor appears in the first input gadget. Enter the short sign of the atom, e.g. O for oxygen. Press <RETURN> and the cursor jumps to the next string gadget, the position field for the X coordinate. Enter 160 for example, do the same for the Y and Z coordinates, and finally enter the radius of the atom. The radius describes the size of the atom. The higher the radius the bigger the atom. Size relationships of the atoms can be found in any garden variety chemistry book. You'll find some examples in the Chemesthetics data files supplied.

Enter all atoms of a molecule one after another. The locations of the atoms to each other can also be found in chemistry books. You'll find some examples on the disk. These can be loaded with the 'Project - Load molecule' menu item. After describing the atoms,

Chemesthetics then needs some data concerning the molecule as a whole.

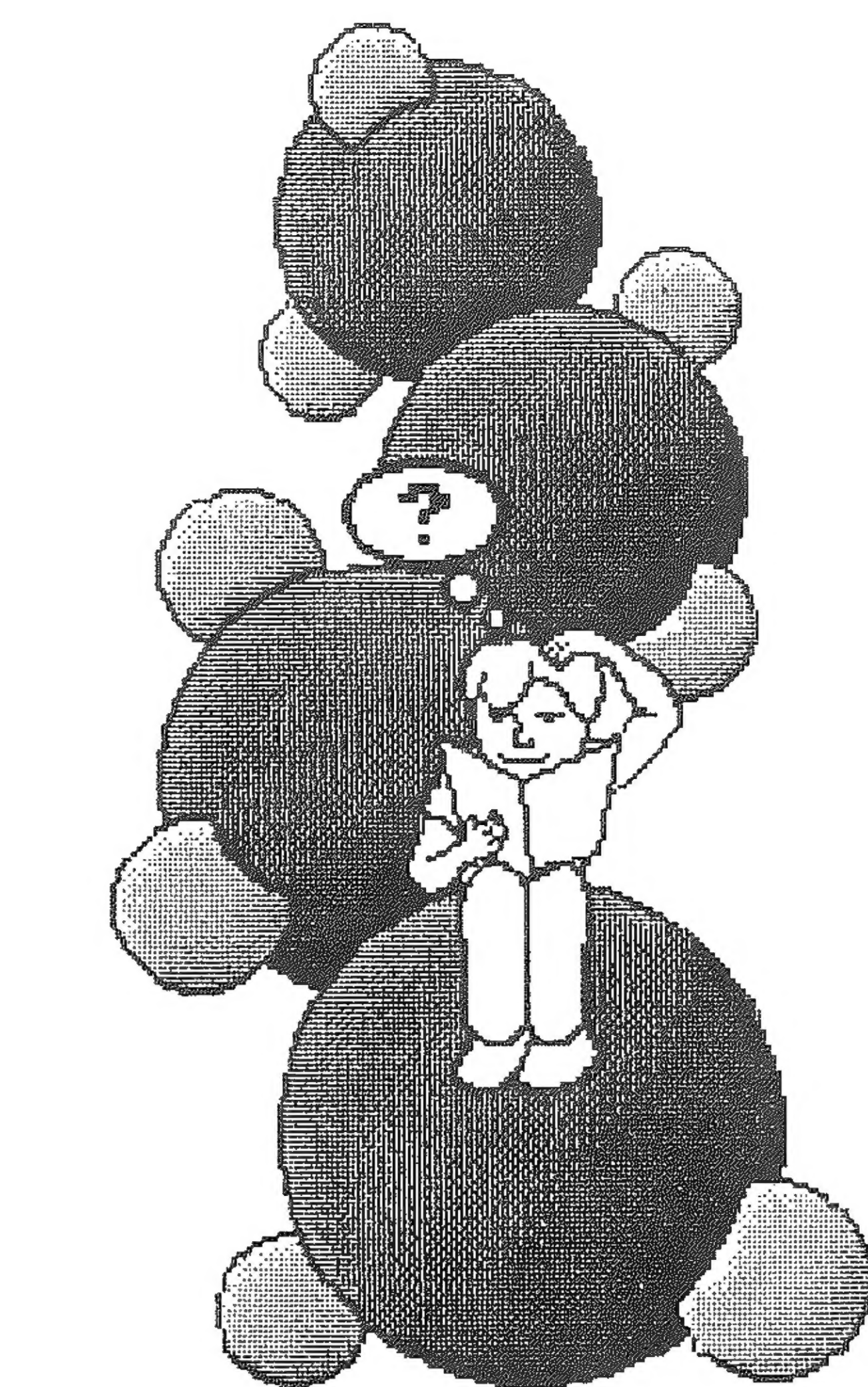
The next three values describe the twisting of the molecule in space. It may be twisted around any of the three axes.

Next the values for the light source. Chemesthetics uses a ray tracing algorithm to create a three dimensional appearance for the calotte model. Even shadowing is taken into consideration. To do this a vector of the light source has to be entered. Reasonable values for example are X=20000, Y=-100000, Z=20000. All inputs are made in picometers (1 pm = 10^{-12} meters). All example molecules on the disk use the above vector.

The last value entered declares the reflection of the atoms. The higher the reflection, the stronger (brighter) the light source will be reflected from each atom. A value of 100 will reflect the light like a mirror (i.e. the atom will appear white).

If you're not totally perplexed at this stage, and reasonably satisfied with your data, then click on the OK-gadget. You can cancel all inputs at this point as well.

To display your creation you'll find two items in the 'Paint' menu i.e. 'Outline' and 'Calottes'. If you select 'Outline' just a circle will be painted for each atom. This is useful because it will give you a quick check on how the molecule will look. This mode gives you the chance to experiment with different data (mostly twists) without having to wait for hours just to see it's not what you wanted. When you are satisfied with all the values then select 'Calottes'. The molecule will then be drawn. Because of the mass



of data, large molecules like the infamous dioxin can take up to one hour to render. But the result should compensate for all the effort.

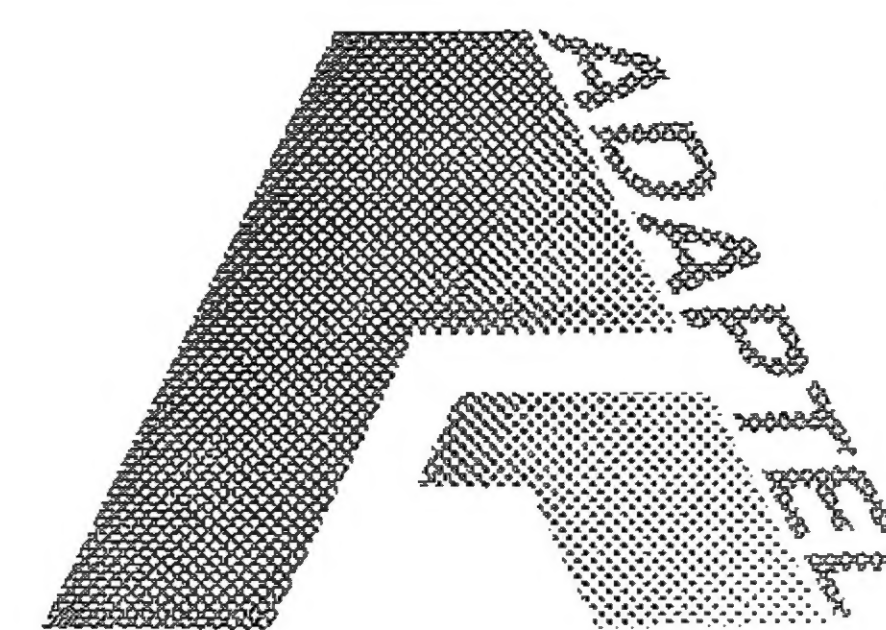
In the 'Project' menu you'll find, among others, two 'save' - menu items, i.e. 'Save molecule' and 'Save IFF'. Use the first to save the molecule as a Chemesthetics datafile, and it will get the extension .cdm. With 'Save IFF' the screen will be saved as an IFF graphics file. If 'Icon for IFF' was selected in the preferences menu an icon will be saved along with the file.

With the 'Palette' menu item you can change all of the 16 colors of the program. Please note Chemesthetics uses most of the colors to draw the atoms. I'm assured that the default colours correspond with Antropow's color distribution. (That's a relief!).

In case all this is sounding too hard most of the needed data can be extracted from simple chemistry books. Also the size relationships between atoms are shown in tables or outlines. Another good source for atom data for example is the shareware program ELEMENTS by Paul Miller located on FishDisk #384. To get a feeling for the data you could also have a look at the example data supplied.

I suppose there is an argument that programs such as Chemesthetics are of limited interest (teachers, students etc.), but the resultant pictures can be fascinating in their own right. (There are eight examples on the disk).

Illustration by David Thompson



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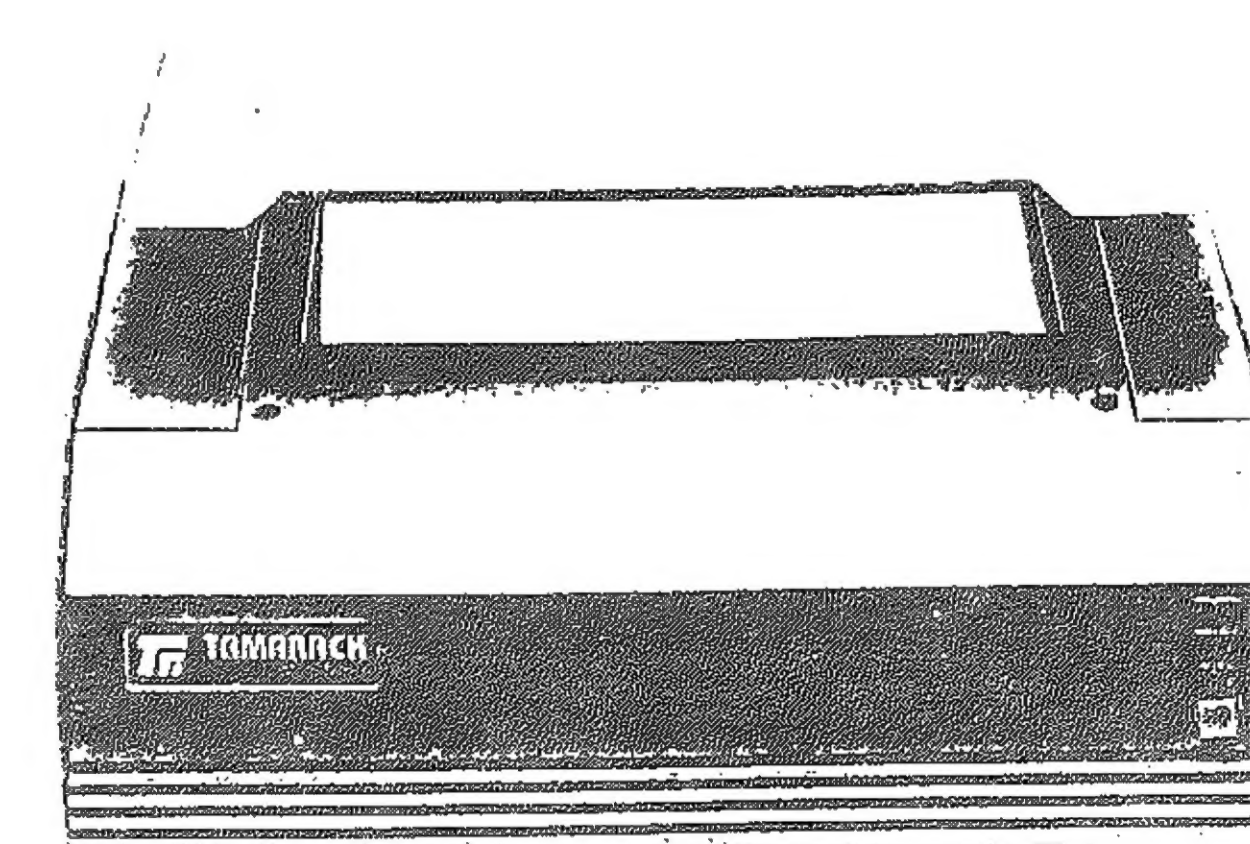
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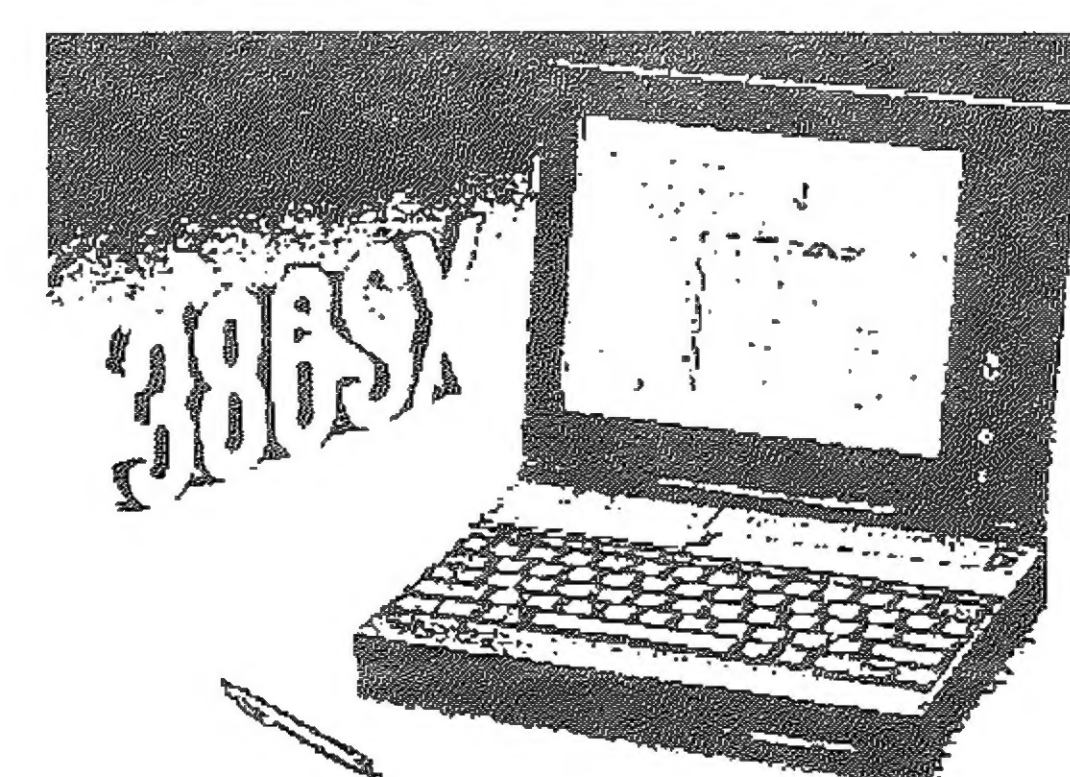
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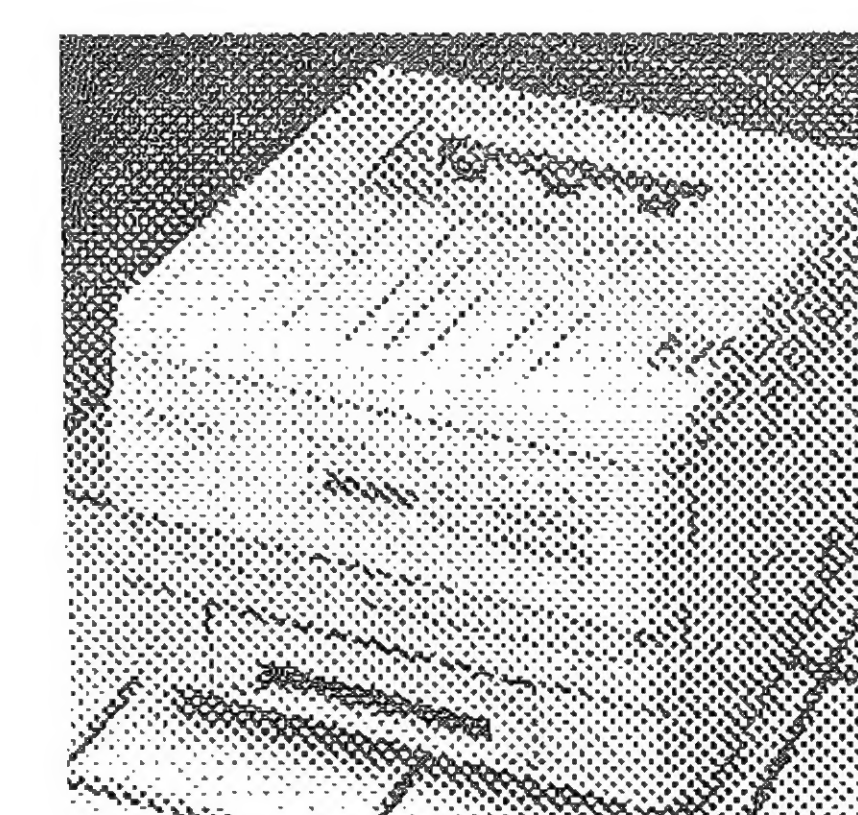
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The new **A500HD** series of SCSI controlled hard drives from the German manufacturer **Protar** are now available in Australia. The standard drives contain high quality 24ms Seagate mechanisms, while the **DC** range use 19ms Quantum mechanisms with 64 kb cache. These superb drives use the main expansion port & perfectly match the Amiga styling. The optional PSU is only required when RAM modules are installed.

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Amiga Side

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2 Meg for A500

The 'V2000' expansion from U.K. manufacturer Virgo Developments contains a real time clock/calendar and up to 2 MB of auto-configuring Ram. The board plugs into the trapdoor expansion bay and connects to an internally fitted Gary adapter. Unpopulated (0 Megabytes) **\$138**

Populated to 2.0 Megabytes **\$278**

4 Meg for A500

The 'V4000' system is similar to the 2 Meg. system described above, with additional sockets allowing up to 4 MB of expansion RAM. Unpopulated (0 Megabytes) **\$216**

Populated to 2.0 Megabytes **\$359**

Fully populated (4 Megabytes) **\$498**

Both the 2 meg. and 4 meg. boards leave the main expansion bus free (e.g. for a hard drive). Other population available.

8 Meg for A500/A1000

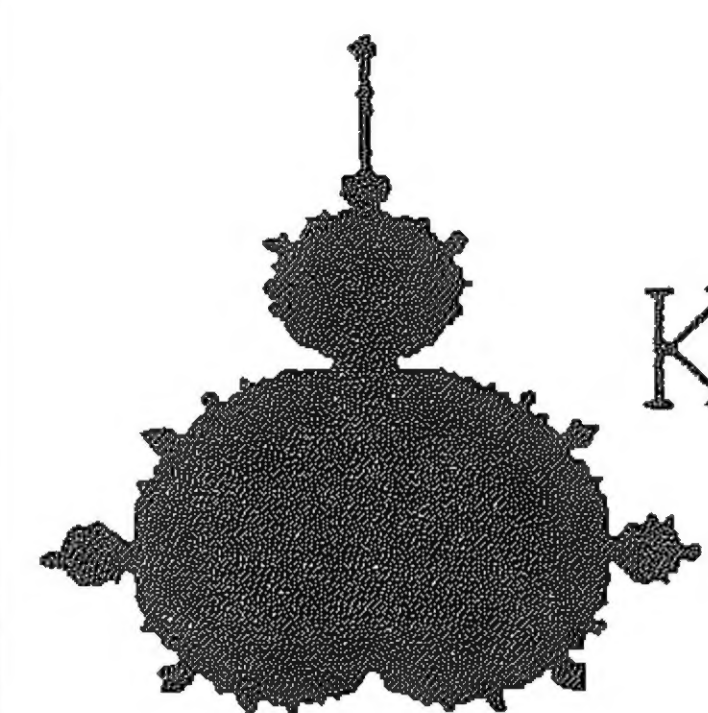
Cortex expansion fits to main bus, leaving warranty intact.

-Fully implemented auto-configure; Fully operational bus pass-thru

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-Special metal 'foot' for A1000 version; RAM test software included.

0 meg.	\$425	6 meg.	\$888
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Where Is That Mouse, Anyway?

by Angelo Bronchinetti

YOU KNOW how you use MOUSE(0)? and then MOUSE(1), MOUSE(2) etc are used to read the position of the mouse-pointer...Well! I wrote my own paint program in AmigaBASIC and found that whatever window I moved to the front using the WINDOW n statement was the window which the MOUSE() functions were relative to.

This is fine unless you want to move a window to the front without changing the window from which the mouse position is read or you want to change the window from which the mouse position is read without moving that window to the front (that makes sense...something to do with the law of inversion).

To get around this problem I have written a subprogram which returns the position of the mouse relative to the current output window. To choose which window to read the mouse position from execute a WINDOW OUTPUT n statement where n is the number of the window.

```
SCREEN 1,320,256,11
FOR n=2 TO 5
  WINDOW n,STR$(n),15,1
NEXT n
ON MOUSE GOSUB MouseClick
MOUSE ON
DEF FNmouseDown = MOUSE(0) < 0
DEF FNmouseUp = MOUSE(0) -> 0
Windo=3
WHILE 1
  IF FNmouseDown THEN
    MouseXY x%,y%
    PSET (x%,y%)
    WHILE FNmouseDown
      MouseXY x%,y%
      LINE -(x%,y%)
    WEND
  END IF
WEND
MouseClick:
  IF WINDOW(0) < Windo THEN
    Windo = WINDOW(0)
    IF Windo < 0 THEN
      WINDOW OUTPUT Windo
    END IF
  END IF
RETURN
SUB MouseXY (x%,y%) STATIC
  xy& = PEEKL(WINDOW(7)+12)
  x% = PEEKW(VARPTR(xy&)+2) - 4
  y% = PEEKW(VARPTR(xy&))-11
END SUB
```

syntax SCREEN number, width, height, no of bitplanes, type
count from two to five using n
syntax WINDOW number, title, rectangle, type, owning screen
go back to FOR if not finished counting
do the MouseClick SUBroutine
each time the left mouse button is hit, define function FNmouseDown which equals -1 if the left mouse button down else 0, define a function FNmouseup which equals -1 if the left mouse button is up else 0, current output window is window 3 keep track using variable Windo.
forever as before.
if the left mouse button is down then do everything indented.
get the position of the mouse pointer and draw a dot there.
while the mouse button is still down get the mouse position and draw a line to the last point plotted go back to WHILE see if mouse still down.
no more things to be done if mouse down, go back to WHILE statement and keep on testing to see if mouse goes down.

'if the window clicked in (WINDOW(0)) is not equal to our record of it then update our record of it in Windo.
if the window clicked in is not equal to 0 then it is a window we can draw in and so make it the output window for graphics statements

go back to the next statement to be executed now MouseClick is finished

comments as before

```
WINDOW OUTPUT 1
WHILE 1
  MouseXY a%,b%
LOCATE 1,1
PRINT "Xpos:"a%,"Ypos:"b%
WEND
SUB MouseXY (x%,y%) STATIC
  xy& = PEEKL(WINDOW(7)+12)
  x% = PEEKW(VARPTR(xy&)+2) - 4
  y% = PEEKW(VARPTR(xy&))-11
END SUB
```

make window 1 (BASIC's output window) the current output window
forever : 1 is considered true as is 'any number not equal to 0'
'get the position of the mouse pointer' by calling MouseXY
SUBprogram & put returned position in a% and b%
put text cursor at row 1 column 1
print text,value;text,value
go back to the WHILE test
declare SUBprogram name and variables for correspondence
grab long integer xy& - 4 bytes
strip off 2nd two bytes for x position, put in variable x%
strip off 1st two bytes for y

This program shows the position of the mouse relative to AmigaBASIC's output window. If you shrink this window and drag it to the bottom right hand corner of the screen you will be able to position the mouse above and to the left of the window. In this case you will get negative values for the mouse coordinates.

MouseXY locates the position of the mouse at one point in time. It does this by grabbing a long integer which contains the y coordinate in the first two bytes and the x coordinate in the second two bytes. Then it grabs the x and y coordinates from the long integer. Have you ever wondered why you must use the MOUSE(0) function before you use any of the other mouse functions? It is because MOUSE(0) does a similar sort of grab. MOUSE(1) and MOUSE(2) give the x and y coordinates of the mouse-pointer the last time MOUSE(0) was executed.

When you call MouseXY the variables which follow must be short integers. Otherwise you will get the type mismatch error.

Here is a little program which uses MouseXY. Type it in and feel free to draw in any of the windows which are created and the output window.

NOTES:

To use MouseXY in your own programs simply add the subprogram to your program (best done with MERGE). You don't require any special .bmap files to use this subprog. The position you get is that of the mouse-pointer's "hot spot". This hot spot can be changed from preferences as well being able to change the colour and shape of the mouse-pointer from there.

A Box Of Games

Reviewed by Paul Somers

Terminator II - Judgment Day

(c) Ocean Software

Game Type - Action.

Players	- One.	Controls	- Joystick.
Game length	- Varies.	Age Range	- 10+
Game Play	- 75%	Entertainment	- 30%
Graphics	- 75%	Sound	- 70%
Value \$\$	- 60%	Overall	- 55%

Follows the movie in its game play, the lead up to each level is good with digitized animation from the movie, but the levels are very simplistic and not that exciting.

There are in total eight levels, the first, sixth and eighth levels are very similar, you are doing the same thing in beating up the T1000, so that makes it only 6 levels. There are two puzzle sections of the game where you have to complete the picture by moving around the various pieces. These levels don't count for much, if you don't finish them it doesn't make much difference.

This is a rather lack-lustre attempt at making a game, don't let the movie persuade you to buy this one.

Final word: If you are into just going around beating up T1000's or shooting up an entire police squad then this game is for you.

Last Ninja III

(c) System Three

Game Type - Action/Adventure

Players	- One	Controls	- Joystick.
Game length	- Lengthy	Age Range	- 12+
Game Play	- 85%	Entertainment	- 80%
Graphics	- 85%	Sound	- 80%
Value for \$\$	- 80%	Overall	- 85%

This game is the third of the Last Ninja series, and is probably the best one in the series, continuing your fight against the evil ninja. This game has a good method of play, designed to suit most game players, it combines strategy, adventure and action into the one game, which makes this one a worthwhile game.

In all it has six challenging levels, where you have to find various hidden objects and weapons, whilst manoeuvring yourself through the three dimensional land of the ninja, destroying any opposition in your way and basically trying to find the exit. Each level gets harder and more complex as you proceed, making this game a real challenge.

This is a lengthy game and it is lacking a save option, which means you have to do it all in one go, which can take some time.

Final word: Not an easy game, it takes skill and practice, but certainly worth the effort at the end, not a bad game.

The Adventures of Robin Hood

(c) Millennium

Game Type - Adventure

Players	- One	Controls	- Mse/Kbd
Game length	- Lengthy	Age Range	- 12+
Game Play	- 55%	Entertainment	- 50%
Graphics	- 75%	Sound	- 65%
Value for \$\$	- 65%	Overall	- 60%

This Adventure follows the tradition of all Robin Hood games, as Robin you must seek out the merry men, rob the rich and give the money to the poor.

This game is set out on a 3-D landscape, it begins with a role play of the events leading up to the current Robin you are playing. In the end you are left with your bow and four gold coins. With this you must travel the lands plotting to take back your title.

While playing the game you click on the spot that you want Robin to go to. Sometimes Robin would get all confused and head off in the wrong direction, which made it hard to play. While searching for merry men, you come across many obstacles, for instance whenever someone is being attacked, Robin just has to help out and more than likely get himself killed in the process.

I spent most of my time getting hung or beaten to death, it is certainly not an easy game, but once you have started to get one or two merry men on your side it gets easier, it is just finding, and then getting the merry men to join you that is the hard part. Thankfully it has a save option so that you don't have to give up your game half way through.

Final Word: Ok if you like adventure games and want to spend hours at it.

R-Type II

(c) IREM

Game Type - Shoot Em up

Players	- Two	Controls	- Joystick.
Game length	- quick.	Age Range	- 7+
Game Play	- 65%	Entertainment	- 60%
Graphics	- 65%	Sound	- 60%
Value for \$\$	- 70%	Overall	- 70%

The traditional shootem-up game. You and your ship have only one aim, to kill everything that appears on the screen, getting additional weapons as you go and killing more enemies. You have to save the universe from the evil Byod empire, going through some of the most difficult levels that can be put into a shootem-up.

For those who like shootem-ups then this one could offer a challenge. If you weren't able to complete the first R-Type then don't even try one, it starts off easy, the first two levels are easy enough, then it gets very hard, then the fifth and sixth levels are almost impossible. You have to have good reflexes to beat this one. In the end you have to destroy these two baby like creatures symbolizing the birth of the new evil empire.

Final Word: Like I said this is a very hard game, if you like shootem-ups and a good hard challenge then this is for you.

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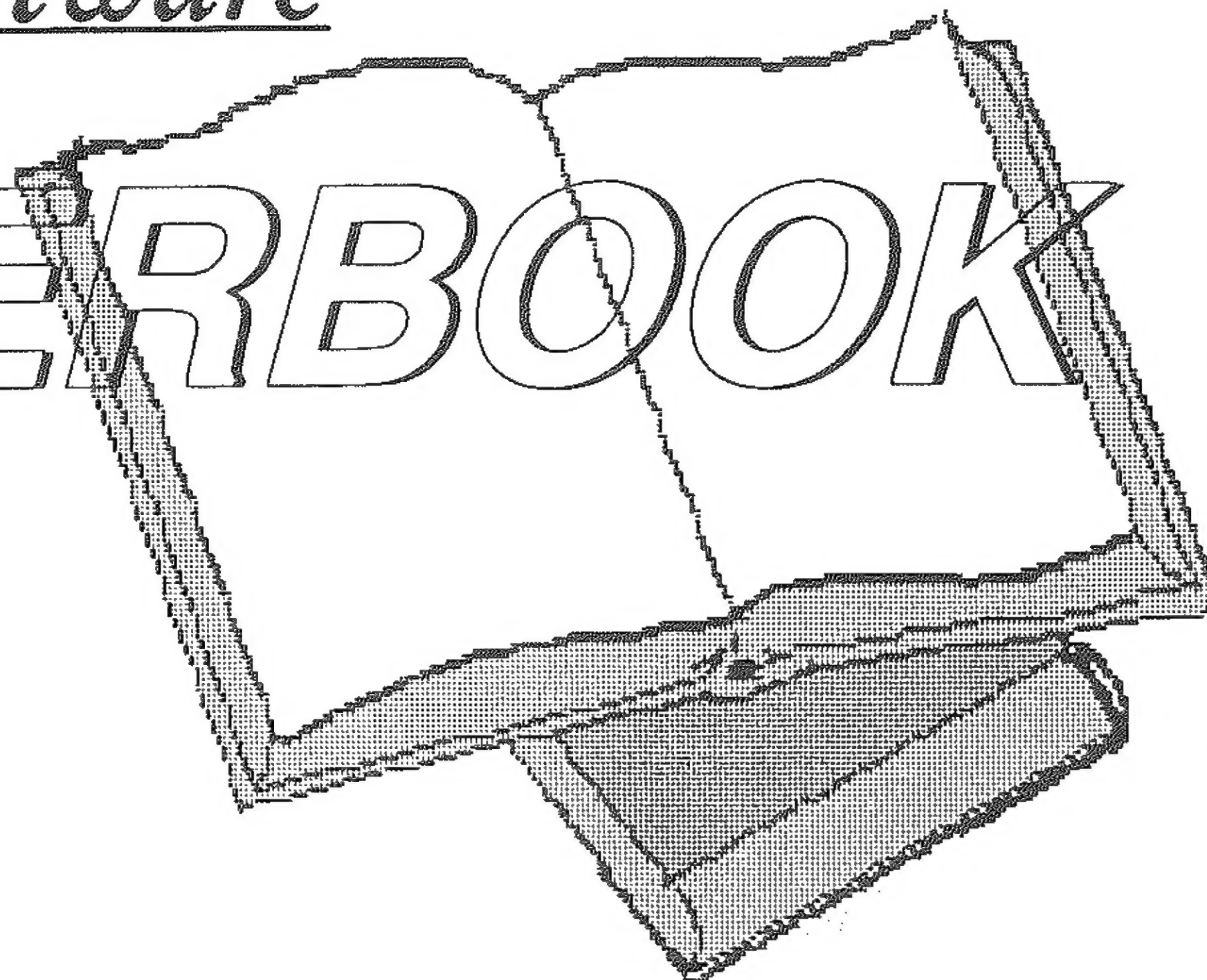
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HYPERBOOK

by Rudy Kohut



The "new age" is upon Amiga users. No longer do you have to look enviously at Mac users with HyperCard - we now have our very own, very capable look alike program that can let the average and not so average user add real polish to whatever you need to do with a computer.

"Gold Disk" has created an easy to use program it bills as a "multimedia tool that lets you store and organise text and graphics in any format". This description doesn't say much at all about what HyperBook can really do. If you use or have read about ARexx, then consider HyperBook as a non-programmers version. One which lets anyone use text and graphics to control displays, show pictures, read text files, run other programs inter-actively, and even create stand alone user applications. Do you want to create your own special database? HyperBook lets you do it simply. Do you want to create storybooks with text and graphics, like the Encyclopedia on CDTV? HyperBook lets you do it simply.

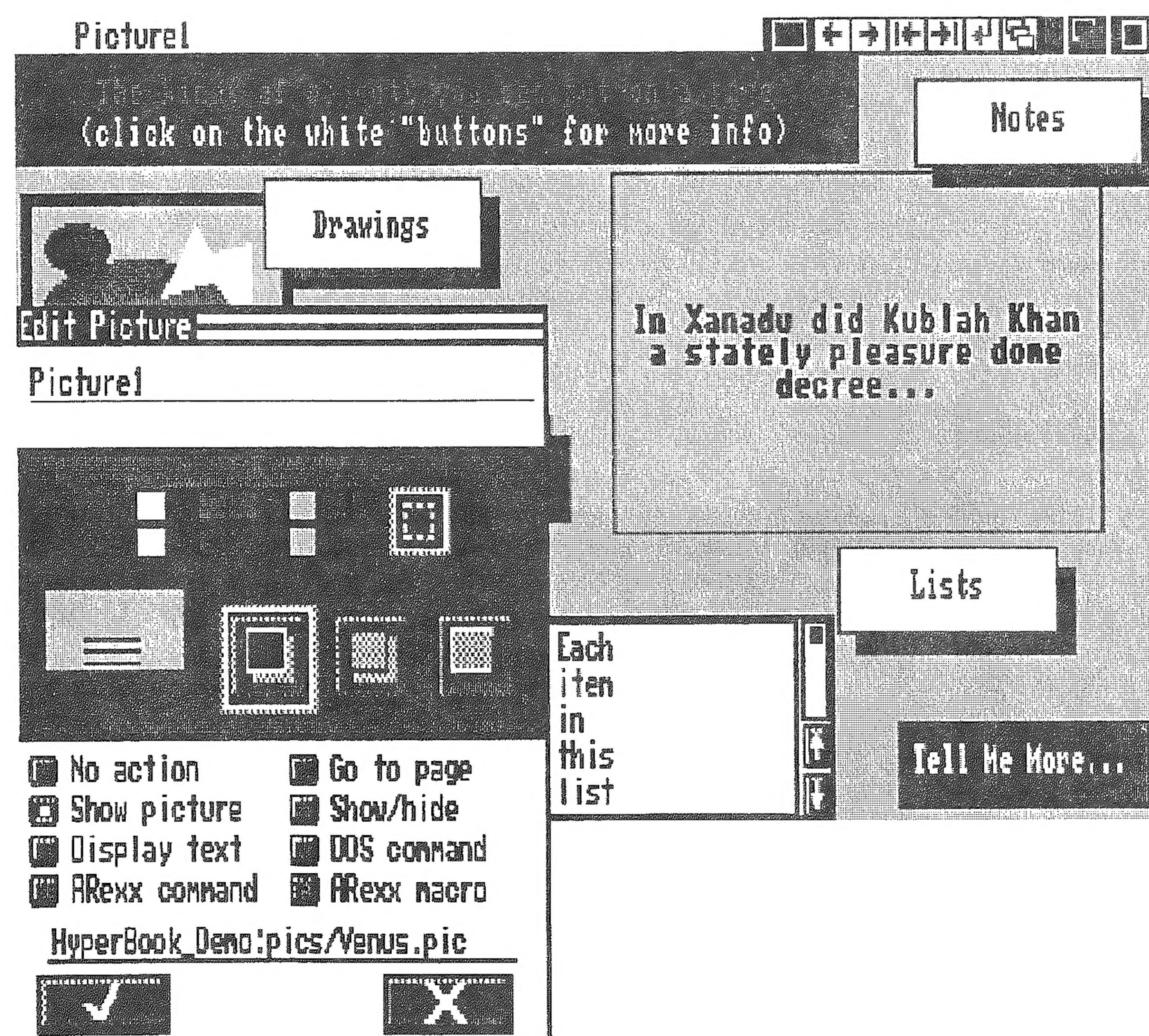
Like the Encyclopedia programs, you can flip between pages of your HyperBook, digress to examine pictures in more detail, check in tables of content for the page you want and go there with a mouseclick.

HyperBook can be run on any Amiga with one megabyte of memory, two disk drives are recommended. For large applications, a hard drive would be in order to store all the files you may need to develop your application.

I have been playing with a "demo" version of the program which has had the "Save" and "Print" facilities disabled but I have been able to borrow a manual and try out the program nonetheless. My first impressions are that the program is stable; it operates well with other applications also running. The manual and the "demo" give a very good overview of what HyperBook does without getting too intimidating. The controls that let you create or edit an application are thoroughly explained, and the user is led systematically through the use of each.

HyperBook is fundamentally a "free form applications generator". This means that you create (draw) the "free forms", eg. a "button", on the "page" (screen), and assign a function to that form, for example, clicking the "button" could trigger a screen of text to appear, or a picture or both, or run an external program, or just turn to another page in the "book", or launch an AmigaDos command, or run an ARexx script. That's all!

Let's take an example. Say you want to describe and catalogue all your drawings or video productions. With HyperBook, you can create a "page" containing a text list of all your work, and by clicking on one entry go to another "page" that has more detailed information about the work and perhaps a "piece" of the drawing or a still image from the video. You could click on the small image and a full screen image could be shown, or you could launch an external video editing program, or whatever you need. Your master page could be, instead of a list, a screen full of small images of all your drawings. Clicking on the image would bring up other pages of information.



Another example? Replace "images" with "sounds" in the previous example. Clicking on a "sound" image could trigger your favourite sound clip using an external program.

HyperBook includes what looks like a powerful macro command language which is based on ARexx - it adds about 130 commands to ARexx for the program to use internally. It also, of course, can use ARexx externally to communicate with other programs with an ARexx port. I haven't tried this feature because it was not available in the "demo" but I gather there is a sample HyperBook called AREXX.hb that comes with the program, together with sample macro hyperbook applications. The manual description of the various commands indicate that this is a very powerful feature indeed. The program comes with a built-in text editor for creating macros or you can use your own.

HyperBook has its own text reader and picture display facility, as well as its own basic text editor mentioned above. The program lets you nominate an external text editor program and an external paint program which can be launched from within HyperBook itself. If this is done, HyperBook shrinks to a small display icon on the WorkBench screen title bar, to conserve memory. When you exit the other program, HyperBook resizes to normal screen dimensions.

HyperBook has a very full and detailed set of object creation and editing features, including a simple yet effective set of drawing functions with which to create circles, polygons, lines, boxes and more, with control over line thickness, fill and colour. The text creation facility is also very good, with control over font, font size, colour, kerning, style, justification, margins, spacing control etc. Objects can have shadows or be embossed for a 3D look and the way in which they react to mouse clicks determined. Some very slick page transition effects are also possible - I counted 15 types to choose from. All of these features are available through simple mouse /icon interfaces and by clicking on gadgets to select the functions you want to apply to the object. It couldn't be simpler!

HyperBook will display all Amiga

pictures, but it warns that HAM pictures will not display properly because HyperBook doesn't use the proper screen mode. You could, however, launch an external picture display program from within HyperBook that could handle HAM properly if you have enough memory available. HyperBook does not have a built-in animation capability, which is a pity because some animated buttons could be very interesting!

The program creates its pages in hi-res but only 200 scan lines tall even on a PAL Amiga. You can change a page to interlace mode but the program only opens up a 400 line screen instead of 512. I was able to change this behaviour only by running the public domain program "Overscan" before starting HyperBook. This p.d. program intercepts calls to the operating system from other programs and changes the screen size to PAL. While this method does work, it is not very satisfactory and Gold Disk should be ticked off for not having HyperBook recognize the appropriate system on startup.

One other noticeable problem is that if one of your "actions" requires a file that the program for some reason cannot find, the only message you get is a quick flash of the screen.

This allows a user to continue with other matters, but the program developer should get a proper file requester during development.

HyperBook comes with two companion programs. The "Reader" is similar to the main program but does not allow the creation and editing of objects. The "Browser" is a smaller version of the Reader that doesn't support loading or saving hyperbooks, search operations, the main control panel or ARexx macros. It is for self-contained hyperbooks that use direct object actions for all their operations. The Reader and Browser can be distributed freely with your applications.

If you need further convincing of the utility of such a program as this, go to a bookshop that sells computer books and look at the volumes written on HyperCard applications for the Macintosh. You will find many reasons to then go out and buy this program! I suspect that you could very easily translate the Mac examples into HyperBook.

This is the type of program that a beginner could use easily and yet have plenty of challenge left for a more experienced user. I highly recommend it.

Illustration by Jim Berry

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Two Tiny Tips

by Norm Christian

Back from the Dead

Recently I had the misfortune to lose some files. Actually it was a disk of 17 songs which I had edited for Bars & Pipes and which represented many, many hours of work. It was my own fault - I was examining them in Diskmaster and hit the delete button by mistake.

Apart from some choice expletives, what does one do? Well, fortunately I had prepared long ago for just such a contingency by installing a program called "Unkill", which has been around for some years. It asks you to put the damaged disk in DF0: and then searches through it. When it finds a deleted file it gives you the name and an option to recover it; if you say yes, it is copied to RAM. So I dug out "Unkill" and ran it.

On looking in RAM I found 16 recovered files plus some fragments labelled "name unknown". Fortunately I had a list of the files and was able to identify the largest "fragment" by its size, so I gave it its correct filename. Now I could see all 17 files in Diskmaster, all correctly named, and thought I was home and hosed.

Not so! Some days later whilst showing a friend Bars & Pipes, I attempted to load from this disk. Imagine my consternation when only one name showed up in the load requester. Yes, you guessed, it was the one I had renamed. So there had to be something different about that file, but what? Back into Diskmaster for further examination - sure enough, all files ended in ".song" which B&P should recognise.

No apparent difference, yet there had to be. It took me quite a while to discover that all the files which Unkill had re-written had 7 blank spaces following the end of the filename. Diskmaster could of course see them but didn't tell me (why should it). B&P saw them as ending in ".song" which being different from ".song" made them effectively invisible to the program. I guess if it hadn't been for that odd

file having to be renamed at the beginning, I would still be wondering what went wrong. Users of Unkill beware! (Still, I wouldn't be without it.)

Those Pesky Icons

Now here's another tip for you. Bars and Pipes automatically writes an icon for every song it saves. Unfortunately these ".info" files are nearly 2Kb long, so after a while

your disk gets a bit cluttered. By removing them all you can usually pack in a couple more songs. So now you have a data disk nicely full, with all icons removed.

Later you decide to do a bit more editing, and in no time at all you get the message "Disk full" right at the point when you are trying to save a file which might represent a lot of work. These pesky icon files are taking up space which you want reserved for productive work.

The answer is a little gem written by Chris Hames called "NoIcon". Put in my startup sequence, it tells the program to kindly refrain from writing icon files. Presto - thanks Chris! B&P should be told to include an option for this purpose, the same as DPaint does! ■

In the Beginning...

by Rob Pemberton

That was then, this is now!

For my sins, I've been attached via an invisible umbilical cord to the Commodore line of personal computers since late '82 - thus I am now a somewhat bemused owner of a venerable Vic20 (16k), a C64, a C128D, and finally an Amiga 500 (the 1 meg variety), together with an immensely overcrowded desk.

Having made the odd passing acquaintance with Ataris, IBM clones, DEC's and Macintoshes along the way, the one quality that I've appreciated in CBM machines has been the EASE with which one can talk directly to the machine (and thus attempt to control its actions), i.e. a few pokes here, a few pokes there.

At least this was the case until the Amiga with its CLI, Workbench and Basic options came along.

For instance, on the older Basic 2.0 machines it was a simple procedure to get a full directory listing - load "\$",8. You want certain files only - then use the wildcard characters. You want a hardcopy? Simple, again - open 4;4:cmd4:list.

OK - maybe the commands weren't the most elegant example of the mother tongue, but at least the manuals (written by CBM's Korean

division) usually made it clear what you had to type to get the desired result.

Now by the time I finally got around to an Amiga, I'm programmed to wanting to know what's on my disks - everything - and the concept that files can be "hidden" from the Workbench display is all a bit foreign to me, having used GEOS on the 64/128 for several years.

After much trial and error, and late night phone calls to ex-friends, what should have been a simple process now stands as follows -

- (a) Load Preferences, check correct printer initialized & driver selected.
- (b) Enter CLI (Command Line Interface)
- (c) Select CD (current directory) of correct drive
- (d) Type dir >prt: opt a (the opt a is necessary, otherwise you'll just get a list of directories)
- (e) Retrieve hardcopy!

Pretty easy stuff, huh? Anyway, I now know the existence of every file on my ever-increasing collection of public domain esoterica. All I need to know now is - what do they all do?? ■

AUG Membership Fees

Annual Fees are being raised from \$25 to \$30. An additional \$3 Projector Levy (see below) will also be charged. So starting January 1992 Renewals/Membership will be \$33. This is the first time that the fees have been raised since the inception of the Amiga Users Group in 1986.

Projector Levy

During November AUG held a Special General Meeting to discuss the purchase of a projection device to aid with meeting presentations. A committee had been previously set up to investigate and make a recommendation to the group.

The Committee recommended that at the moment we don't buy anything because although several devices almost meet our needs nothing is exactly right. These devices are improving rapidly and the price is dropping.

It was suggested and later a motion along these lines was passed.

That each AUG member pay a once-off levy of \$3. The levy will be collected with your membership renewal or can be paid earlier. The money collected from the levy is to be set aside for

the express purpose of purchasing some projection device to be determined at a later date. The levy collection will continue for one year or until \$7,000 is raised. Other fund raising activities will take place in an attempt to raise the necessary amount. NWAUG currently have a \$1 per head surcharge at each of their meetings and have raised approx. \$450 so far.

When a specific unit has been chosen another meeting will be held to approve the purchase.

Simon Shead has written about his views on page 2. If anyone has something further to add then send it in.

It will be a few months yet before the money is raised so there is plenty of time for discussion.

Audio Engineer upgrades

Peter Norman the author of Audio Master and Audio Engineer gave an entertaining and informative demonstration of his latest program Audio Engineer II at last month's Burwood meeting. Peter has offered to upgrade his previous programs to Audio Engineer II. You can get more information from

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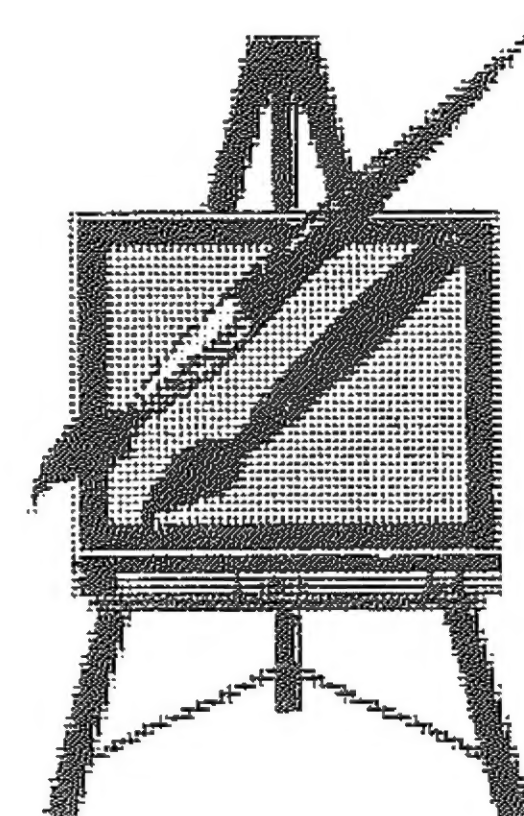
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Amiga Users Group, P.O. Box 684E, Melbourne 3001.

The ART SIG on 19th November was held in Aspendale. There were about a dozen members in attendance, quite a few new faces again this month. It was a very busy meeting but I think that every one got a lot out of it.

Lisa Roberts from The Animation Network attended the meeting for the first time, from her reaction to the work she saw, she should become a regular. Lisa is setting up an animation network, where animators provide their work for inclusion on a video tape. The tape is sold to interested parties. From the demo tape that Lisa showed at a recent AUG meeting it is a very entertaining and professional presentation. Lisa's Network also provides disk based animations and contact between interested animators. The Video Tape is a showcase for animators and the Network will provide contact between the animators and people who are interested in using either one of their animations or their talent, to produce new work. Lisa showed some of her own animations and then various pieces of art work and animations produced by members of the Art SIG were shown. A musical background was provided by Joan Wood and Norm Christian with pieces produced using Deluxe Music and Bars and Pipes. Members whose works were shown included Gwen Wood, Geoff Wood, Nathan Mitchell, Rod Clifton and myself.

The new Michael Jackson video was studied because this has some of the best examples of morphing that you could ever wish to see.

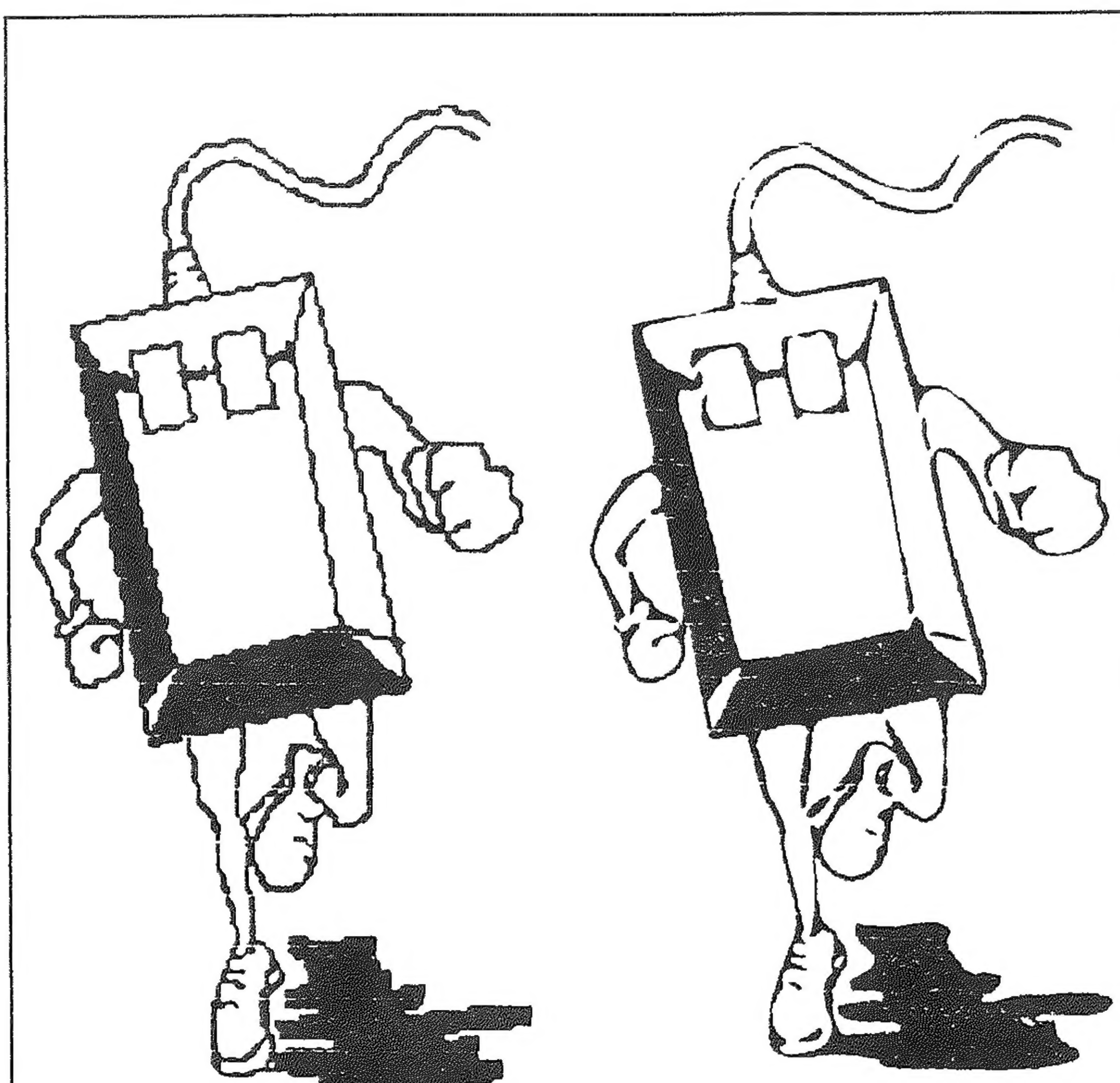
The transitions from one face to another or from the Black Panther to Michael are exceptional and even played frame by frame the changes are smooth and clean. Unfortunately while the SIG was in progress the late night news ran a short piece on the making of these effects. My wife managed to tape some of it for me. Inspired by the effects in the video I produced a small animation of a man's head from Comic Setter, morphing into a girl's head from the same program. Although it took only a short amount of time to produce this



Art SIG

sequence, and the results were not exactly top quality, it is clear that there is a lot of potential for this technique on the Amiga. We will investigate it further at later meetings if there is enough interest and maybe produce a short animation or write a separate article for the Magazine.

Len Heitman and Dick Bartholomew were very excited by an article in the September 1991 Scientific American on Lyapunov



Bitmapped

Structured

equations. I thought they looked like a strange form of Mandelbrot, but I was told they were totally different. Len had produced several plots of these functions which he displayed both on one of the computers at the meeting and also on printout from his colour ink jet printer. The program that Len used to help produce the pictures with was Lyap by Virtual Reality. Len and Dick agreed to write an article for the magazine in the near future on how the function works.

Following the great illustrations that have been appearing in the

Workbench Magazine recently, a discussion took place on how to print them without the jaggy look. In some cases the jaggy look can be used to show that these are computer graphics and not hand drawings that have been manually pasted into the original page. Other times it would be much better if the illustrations could be printed with smooth lines and curves. If the drawings had been done using a structured drawing program like ProDraw or Design Works they would print out perfectly. Unfortunately these programs are not as easy to draw with as a good paint program like Deluxe Paint so the artistic flair can be hindered by using them. Fortunately it is now possible using a program called Trace, which comes with Pro Draw II, to convert Bit Map graphics into structured drawings. When this was

demonstrated at the meeting everything worked fine. Unfortunately when I got home and started to write this article I could not get the structured drawing file to import properly into Page Stream. The main trouble seemed to be with the fill function. The structured drawing was printed out using Pro Draw. The black fill on the sides of the mouse and in the shadow would not import properly into Page Stream. Every time traces with these bits filled, were imported into Page Stream, the system crashed. Unfortunately I was not able to find a solution to this before the Magazine deadline. I will investigate the problem and report on it

at a later date. You can see the difference though in the two pictures. The technique has a lot of potential. The Jaggies just disappear.

The next Art SIG will be held at Aspendale on Tuesday 17th December starting at 7.30 pm. Anyone interested in attending should contact me at the next AUG meeting, SEAUG meeting or call me on 5514760.

John Barlow

Art & Music Icons by Rod Clifton

SEAUG

Well unfortunately, the SEAUG Committee meeting was a flop, I guess everyone expects a meeting to just happen and at the same time prosper. A few dedicated members were present and they made the following decisions:

Howard Alexander		
Portfolio	Title	Votes
Catering	Tea Lady	100%

Russell Porteous		
Portfolio	- Title	Votes
AUG Special Envoy		default

Although there was a relatively

small showing of members, there was a lot within the meeting itself. With the aid of modern technology we were able to demonstrate one of the great assets of the AUG, the Amiga Central BBS. There was also a demonstration of a new piece of software called FOOZLE for Bulletin Board Points. Apart from the communications demonstrations we also discussed quite a few new "Public Domain" software pieces. One such piece of software is called ARQ which is a system requester replacement for workbench. ARQ also allows the user to attach sound files to requesters. An example of this is on my Computer where I have a sound file operating to tell me to put a disk in the disk drive. Although this is a little gimmick, it does have a valuable place in your software library.

At the next meeting, Tuesday the 10th of December, we will be holding our elections for the second time. I do hope, that there will be considerably more support for this meeting and look forward to your attendance.

After a Christmas break, the next meeting will be on Tuesday the 28th of January, where a new year begins.

Just to remind you all once again, the SEAUG meeting times are as follows:

2nd Tuesday of each Month 7:00pm
4th Tuesday of each Month 7:00pm

At Cheltenham Hall, Cnr Charmen Rd & Nepean Hwy Cheltenham.

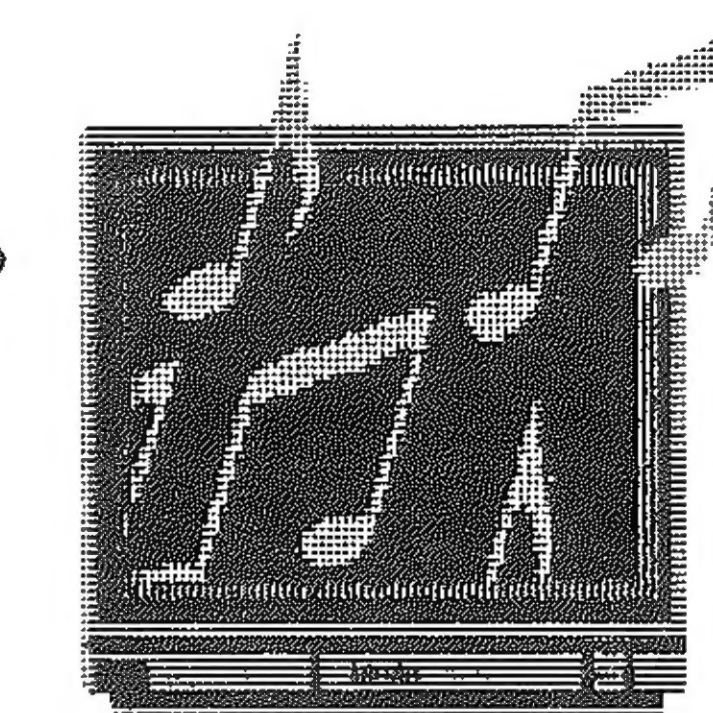
I would like to take this opportunity to request from all members some support for the January "BUMPER" issue of the AUG magazine. This issue will be brought to you by the SEAUG in Disk Format. All articles can be Uploaded to Amiga Central BBS or the Editor (Ashley) who will pass their contribution to myself.

On behalf of the SEAUG, I would like to wish you all a happy & safe Christmas and a very good new year.

Looking forward to another year of the AUG,

Russell Porteous
(Special envoy of SEAUG to AUG)

Music SIG



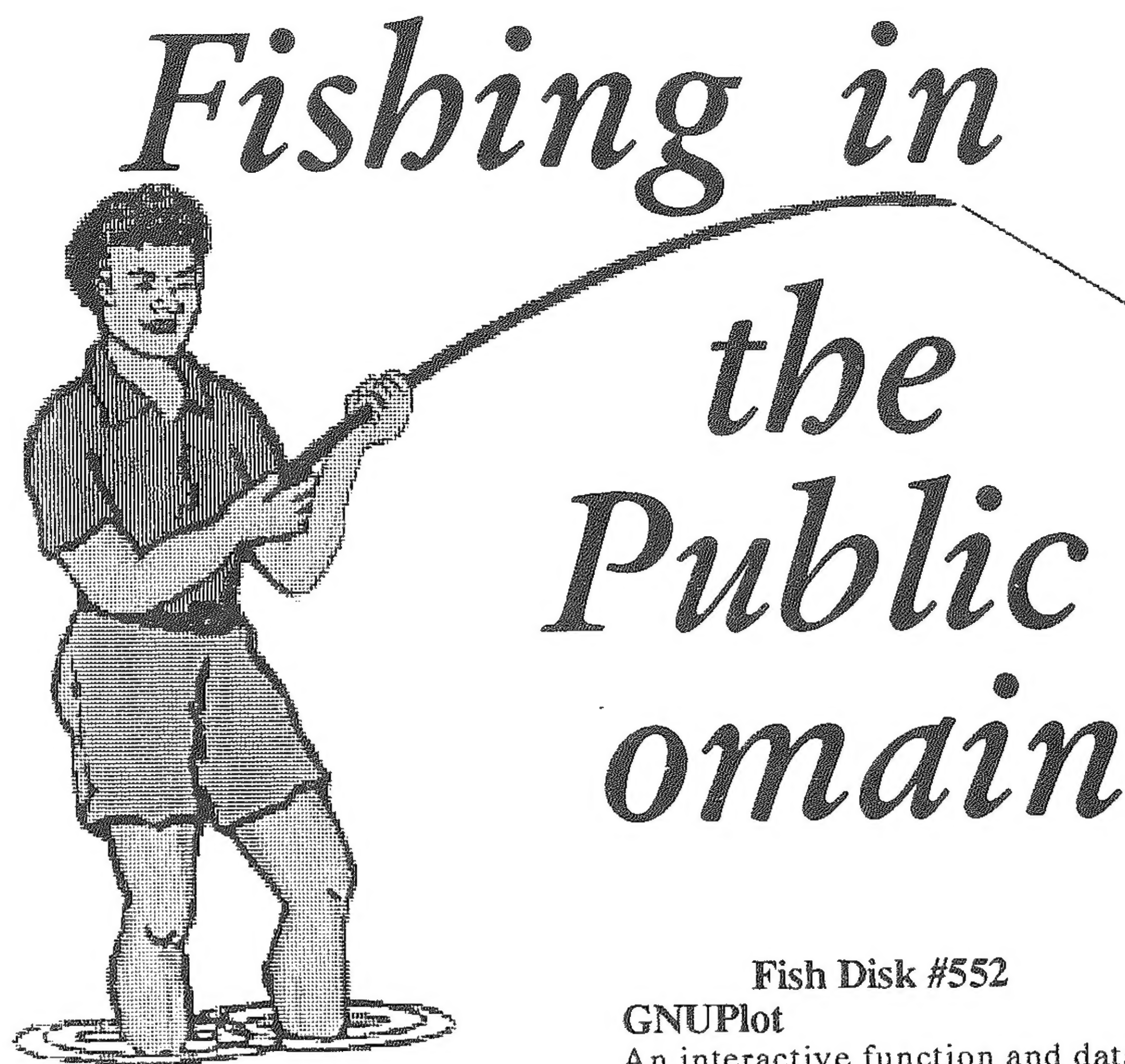
The saga of the Music Sig continues as before, that is, low in numbers, high in interest and learning value for all, including myself. It is a truism that the best way to learn is to teach, and in demonstrating Bars & Pipes Professional, questions and suggestions from those participating have frequently forced me to examine options I had not previously got around to and indeed, may have subconsciously put in the "too hard" basket. Several fortuitous discoveries emerged at the November session. For this I am grateful, and am quite happy to continue to host the SIGs so long as members may wish.

On the other hand, it is not my desire to be seen as a teacher, but would rather be a catalyst bringing together ideas from other users of music programs for the benefit of us all. Therefore I again appeal to members to volunteer as hosts; ideally each SIG should be held in rotation at a different home so that we could examine a number of different MIDI configurations and/or programs in use. If anyone can assist, even if only on a "one-off" basis, please let me know.

As the next SIG would normally fall on a Monday evening only 2 days before Christmas, we will omit the December SIG and hope to see you in January. However, I will be available over the holiday period, so any members who may be disappointed by this are cordially invited to phone 798-6552 to arrange a visit.

Thanks to those who have helped with the Music SIGs, and best wishes to all members for the festive season and 1992.

Norm Christian



Fish Disk #551

ARTM

Amiga Real Time Monitor displays and controls system activity such as tasks, windows, libraries, devices, resources, ports, residents, interrupts, vectors, memory, mounts, assigns, locks, fonts, hardware and res. cmds. This is version 1.3, an update to version 1.0 on disk #327. Shareware, binary only. Author: Dietmar Jansen and F. J. Mertens

CWeb

A programming tool that allows you to program top down, by splitting your program into many small, and understandable modules which cangle tangles into a compiler understandable file. By applying cweave to the program you can produce a pretty-printed listing for processing with TeX. This is version 2.0, includes source. Author: Donald Knuth, Silvio Levy, port by Carsten Steger

ToolManager

ToolManager is a full featured program to add programs (either WorkBench or CLI) to the tools menu of the 2.x WorkBench. Programs can be added by dragging their icons onto the ToolManager "config" window or the optional ToolManager icon or by editing the config file. Requires Workbench 2.0. This is version 1.5, an update to version 1.4 on disk #527. Includes source. Author: Stefan Becker

WBGauge

A utility to patch AmigaOS 2.0 to bring back the little gauge in the left border of disk windows, showing the ratio of available space on the disk. Version 1.2, an update to version 1.0 on disk #417. Binary only. Author: Jean-Michel Forgeas

Fish Disk #552

GNUPlot

An interactive function and data plotting program which supports a great number of output devices. Includes extensive on-line help. This is version 3.0, an update to version 2.0 on disk #526. New features include support for surfaces, more flexible data file handling, unified PostScript support, and more. Includes source. Author: Thomas Williams, Colin Kelley, et. al.

TaskPri

A small CLI command that allows you to set task priorities from the command line. Useful for your startup-sequence. AmigaDOS 1.3 and 2.0 compatible. Includes C source. Author: Steve Anderson

TSFSuite

A suite of programs to allow use of a Teac SCSI Floppy on the Amiga. Included are programs to set the mode to 1,2 or 4 Meg [TSFMx], to format to 1,2 or 4 Meg [TSFFx], a utility that does disk changes for you [TSFADC], and a SCSI exerciser to explore the controllers on the SCSI bus. Source is available upon request. Author: Harvey Taylor

Fish Disk #553

24BitTools

Three conversion programs to manipulate 24-bit images. IFF24To8 converts 24-bit IFF images to 8-bit IFF images, Pro2BMP converts 24-bit 3D-Professional format images into 24-bit ".BMP" files that Microsoft Windows can understand, and Pro2IFF converts 24-bit 3D-Professional format images into the more useful 24-bit IFF format. Includes source. Author: Dallas Hodgson

AddMenu

A program to add infinite number of menus to the Tools menu on Workbench V2.0. Uses the correct Workbench.library calls and allows updating from CLI or from within the menu itself, meaning infinite number of functions. Version 1.54, update to V1.50 on disk #501. Binary only, source available from author. Author: Nic Wilson

AutoCLI

A 'PopCLI' type replacement that works with WorkBench 2.0 and fully compatible with A3000 & accelerator boards. Always retains the default path and stack, and current directory. Can automatically open CLI/SHELL windows to 1 pixel less than screen size on opening. New functions include spline patterning on blanking, more function keys, mouse activated screen shuffle, close gadgets on Shell windows and more as many users have requested. Version 1.99n, an update to version 1.99d on disk #501. Binary only. Author: Nic Wilson

FAFF

Specification for the FAFF spreadsheet file format used by the Gold Disk products "Professional Calc", "The Advantage", "Office Calc" and "Office Graph". Describes version 2.0 of FAFF. This information should allow 3rd party developers to create and use files that are compatible with ProCalc. Author: Michal Todorovic / Gold Disk

RoadRoute

A program that determines from a user modifiable data base, the shortest and fastest routes between two cities. This is a German version of the distribution on disk #504, with 2641 German cities (towns, hamlets, etc) and 5555 connecting roads. Requires 1Mb. Binary only. Author: Jim Butterfield, Gunter Kirnbach

SysInfo

A program which reports interesting information about the configuration of your machine, including some speed comparisons with other configurations, versions of the OS software, etc. This program has been very popular with many users around the world and has been fully updated to include many new functions as requested by users. This is version 2.40, an update to version 2.22 on disk #502. Binary only. Author: Nic Wilson

Fish Disk #554

Amastermind

A mastermind type game written in AMOS and compiled so that it can be run from workbench. Fully mouse and menu driven. Features choice of 6 to 10 colors with 4 to 8 holes. This is version 1.1, shareware, binary only. Full source available from author. Author: Andrew Kreibich

IFSgen

An Iterated Function System generator. Generates pictures of ferns, trees, galaxies, snowflakes and many others using IFS codes (a type of fractal). Features full mouse control of the functions which define the picture. Just point the mouse at one of the parts of the shape and drag it around the screen. Fully menu driven, with the ability to load and save IFF pictures and the codes that generate them. Fine tune codes and move them around the screen, zoom in and out and much more. Lots of example files. Written in AMOS and compiled so that you can run it

from WorkBench. Version 2.1 shareware version with saves disabled, binary only. Requires 1 Mb of memory or more. Full source code available when you register. Author: Andrew Kreibich

Landmine

A game of logic. A number of landmines are buried in the playing field and you need to work out where they are, avoid them, and clear the rest of the field to get maximum points and advance to the next level. Written in compiled AMOS, requires 1Mb of memory or more. This is version 1.0, shareware, binary only. Full source available from author. Author: Perry Rosenboom

Landscape

A fractal scenery generator written in AMOS and compiled so that it can be run from workbench. Features many user adjustable parameters such as height, sea, tree and snow levels, beaches, lighting angles, and palette. 2D (contour map) and 3D rendering. Some example sets of parameters provided. Ability to render in 5 different resolutions so that fast (10 seconds) previewing of a scene is possible. Fully detailed scenes take about 30 minutes. Version 1.1, shareware (saves disabled), binary only. Requires 1 Meg. Full source code available from author. Author: Andrew Kreibich

Version 1.1, shareware (saves disabled), binary only. Requires 1 Meg. Full source code available from author. Author: Andrew Kreibich

LVD

A first defense utility against file and link viruses. It patches the LoadSeg vector(s) and checks every executable that comes along. Recognizes 25 file or so link viruses. Version 1.61, binary only. Author: Peter Stuer

SubAttack

A "shoot the ships" type of game based on an old arcade game where you have to fire your torpedos at the right time, so that they strike a ship as the ships move across the screen. This is version 1.0, shareware, binary only. Written in compiled AMOS. Full source available from author. Requires 1Mb or more of memory. Author: Perry Rosenboom

Fish Disk #555

EasyColor

A color palette tool that you can use in your own programs. Works with any screen depth and type. Includes a usable demo. This is version 1.1, includes source in assembly. Author: Preben Nielsen

FED

A binary file editor with lots of options. This is version 1.1, binary only. Author: Thomas Jansen

FlashCopy

A multitasking friendly disk copier that can make nibble copies as well as standard DOS copies in about 75 seconds. Version 0.9, binary only. Author: Thomas Jansen

HPMode

A script file that sets fonts, attributes and some printer commands for the Hewlett Packard DeskJet 500 printer. It accesses some features of the DeskJet that are difficult to set from

preferences or the printer. Version 1.0, binary only. Author: Doris Ballard

RMBSHift

A program that lets you use the right mousebutton (RMB) as a SHIFT-key. Useful when selecting multiple icons on the Workbench. Only uses 268 bytes of memory. This is version 2.0, an update to 1.0 on disk #547. However it is completely different from 1.0. Includes source in assembler. Author: Preben Nielsen

TheA64Package

A comprehensive emulator/utility package to assist Commodore 64 users in upgrading to the Amiga. This package compares to or surpasses the commercially available packages of the same nature. Many of the utilities require a hardware interface that allows the Amiga to access C64 peripherals such as disk drives and printers. The hardware interface available from QuesTronix. This is version 2.0, an update to version 1.0 on disk #379, and includes many new features. Binary only. Author: Cliff Dugan, QuesTronix

Fish Disk #556

ASMOneDemo

A demonstration version of the commercial assembly development package "ASM-One" with save disabled. Provides editor, macro-assembler, optimizer, monitor and debugger. Can be controlled via mouse or keyboard. Includes assembly include files and offsetables. Many documented examples provided. V1.02, binary only. Author: Rune Gram-Madsen, DMV-Verlag

Scheme2C

A Scheme compiler which accepts the language defined in the essential portions of Revised Report on Algorithmic Language Scheme, with minor constraints and some additions. The compiler produces C source files which are then compiled using the system's C compiler (Lattice C 5.10 on the Amiga) to produce conventional object and executable files. Because of the size of the distribution, it has been split onto three disks as follows: source and documentation archives on 556, M68000 binary archive on 557, and M68020 binary archive on 558. This Amiga port was done by Mike Meyer, based on the 28-Sep-90 version of the translator. Author: Digital Equipment Corporation

VirusChecker

A virus checker that can check memory, disk bootblocks, and all disk files for signs of most known viruses. Can remember nonstandard bootblocks that you indicate are OK and not bother you about them again. Includes an ARexx port. Version 5.30, binary only. Author: John Veldthuis

Fish Disk #557

AutoCentre

A utility for AmigaDOS 2.0 that will automatically center any new screens that are opened. This is especially

useful when you have an overscanned WorkBench screen under 2.0 but find that a lot of applications still open on a 640 wide screen that is aligned with the left edge of the screen. With this program, these screens will be centered as they are opened. Version 1.2, binary only. Author: Colin Bell

DPatch

This program allows you to change the default overscan sizes used in DeluxePaint 3.25 & 4.02. This is especially useful for loading in old animations created with Dpaint 3.14 and animations created in other programs whose screen sizes do not match the default Dpaint sizes. Author: Colin Bell

Scheme2C

A Scheme compiler which accepts the language defined in the essential portions of Revised Report on Algorithmic Language Scheme, with minor constraints and some additions. The compiler produces C source files which are then compiled using the system's C compiler (Lattice C 5.10 on the Amiga) to produce conventional object and executable files. Because of the size of the distribution, it has been split onto three disks as follows: source and documentation archives on 556, M68000 binary archive on 557, and M68020 binary archive on 558. This Amiga port was done by Mike Meyer, based on the 28-Sep-90 version of the translator. Author: Digital Equipment Corporation

Warp Speed

A program that will present you with an animated view out the window at a vehicle moving at 'Warp Speed.' This program was developed as a C language learning tool by the author. Version 1.0, includes all source. Author: Doug Peterssak

Fish Disk #558

BTNTape

A "Better Than Nothing" SCSI tape device handler. Provides flat file access to a SCSI tape drive from application programs using simple DOS calls to Read() and Write(). It can also be used with the Amiga TAR utility for disk backups. Requires a "SCSI-direct" compatible SCSI bus adapter. This is version 2.1, an update to version 2.0 on disk #471. It fixes a number of bugs, and includes some new features such as appending files to

existing tapes. Includes source. Author: Robert Rethemeyer

DisDF

Program to disable DF0-DF3 to stop that empty drive clicking by putting the trackdisk device tasks in a removed state. Can be run from CLI, startup script or W.B. Command line options select drives and also remove the File System tasks to reduce CPU load a little more. This is version 1.1, an update to version 1.0 on disk #531. Includes source. Author: Patrick F. Misteli

Fish Disk #559

A Scheme compiler which accepts the language defined in the essential portions of Revised Report on Algorithmic Language Scheme, with minor constraints and some additions. The compiler produces C source files which are then compiled using the system's C compiler (Lattice C 5.10 on the Amiga) to produce conventional object and executable files. Because of the size of the distribution, it has been split onto three disks as follows: source and documentation archives on 556, M68000 binary archive on 557, and M68020 binary archive on 558. This Amiga port was done by Mike Meyer, based on the 28-Sep-90 version of the translator. Author: Digital Equipment Corporation

Addresser

A small name, address and phone number filer that supports mail merging, auto dialing (with a modem), searching and label printing. Quite handy for keeping mailing lists. This is version 1.0, binary only. Author: Jeff Kelly

APIG

An ARexx external function library similar to RexxArpLib. The APIG.LIBRARY provides the ARexx programmer with access to most of the resident Graphic, Intuition, and Layer library functions. This library allows one to create the underlying data structures that are used by the Graphic/Intuition library functions. These data structures are then used with other library functions to create custom INTUITION screens and windows. Version: 1.1, binary only. Author: Ronnie E. Kelly

Aquarium

A program for searching through a special database containing information about the contents of the library, in order to find programs that match a specified list of conditions. Includes a database of disks 1-550

and two programs to add the contents of future disks to the database, one by Silvano Oesch and the other by B. Lennart Olsson. Aquarium version 1.15, Olsson NewFish version 1.13, and Oesch NewFish version 2.6. Binary only. Author: B. Lennart Olsson and Silvano Oesch

RexxRMF

An ARexx external function library which provides keyed file access using AVL trees. With this library one can index data files for fast search/retrieval of data records. The record management functions allow for variable length keys, variable length records, variable number of fields per record, multiple indices on a single file, duplicate or unique keys, passing of record data directly to/from ARexx variables, etc. This is version 0.5, binary only. Author: Ronnie E. Kelly

Fish Disk #560

BootX

An easy to use boot, file and link virus killer with a KickStart 2.0 look (even under KickStart 1.3). Has lots of options to detect and kill Amiga viruses. Version 4.02, an update to version 3.80d on disk #542. Binary only. Author: Peter Stuer

Llamatron

A fast, original rendering of the eighties 'Robotron' by Williams. It features over 100 levels, sampled sound, single player mode, 2-player team and individual modes, droid-sidekick modes, 2-joystick console mode, dozens of different, weird enemies and an abstract sense of humor. Includes two versions, a 512K version and a 1Mb version with better samples. This is version 1.0, an update to the copy on disk #541, which was also version 1.0, but was missing the 512K version file. Shareware, binary only. Author: Jeff Minter

MuchMore

Another program like "more", "less", "pg", etc. This one uses its own screen to show the text using a slow scroll. Includes built-in help, commands to search for text, and commands to print the text. Works with PAL

or NTSC, in normal or overscan modes. Supports 4 color text in bold, italic, underlined, or inverse fonts. Version 3.0, this is an update to version 2.7 from disk #378. Includes source in Oberon and assembly code. Author: Fridtjof Siebert

STScan

A utility program for using a Siemens ST 400 SCSI flatbed scanner with the Amiga. Can be adapted to other scanners and serves as an example of scsi-direct access to scsi devices. Version 1.0, includes source in C. Author: Frank-Christian Kruegel

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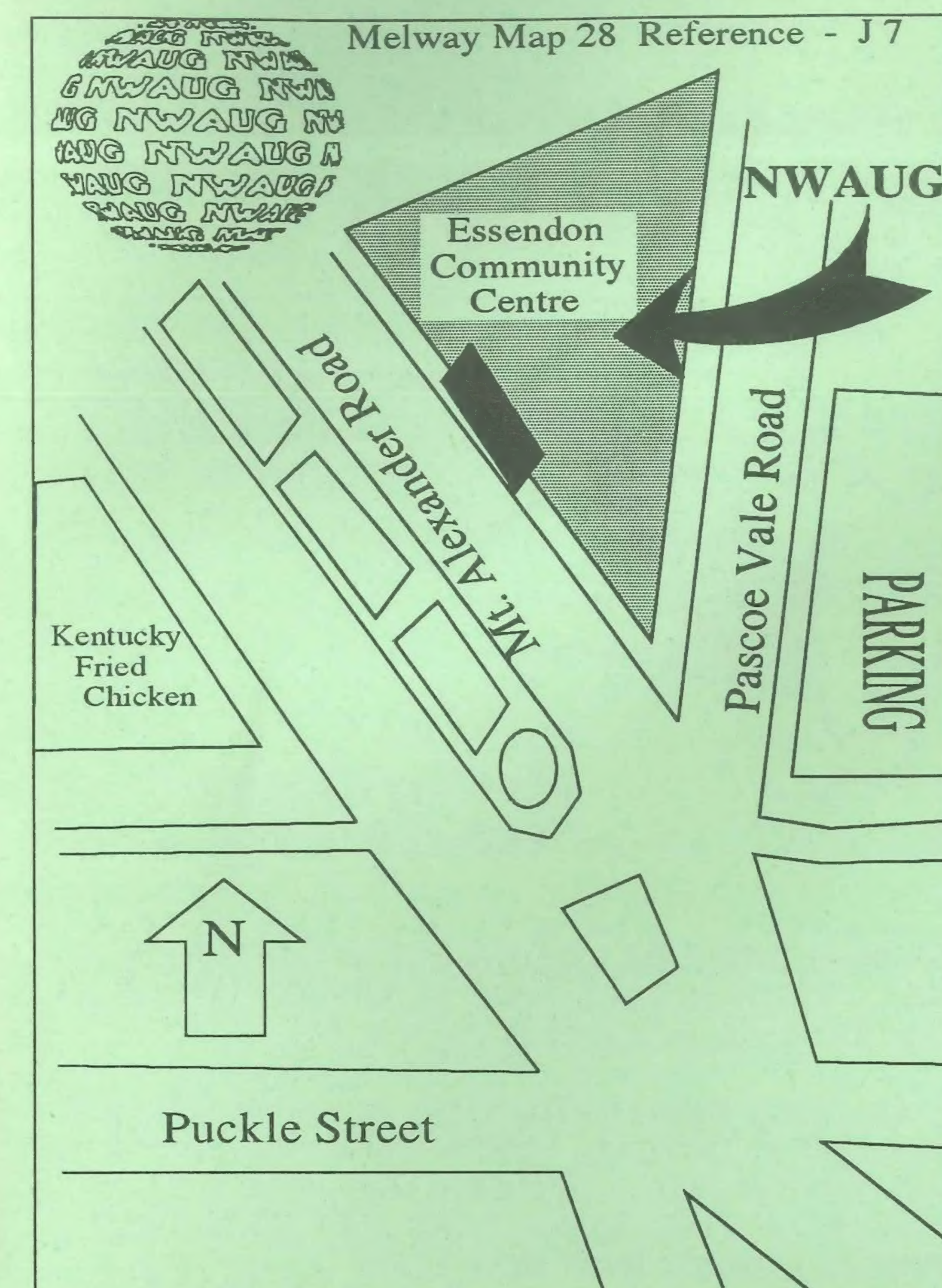
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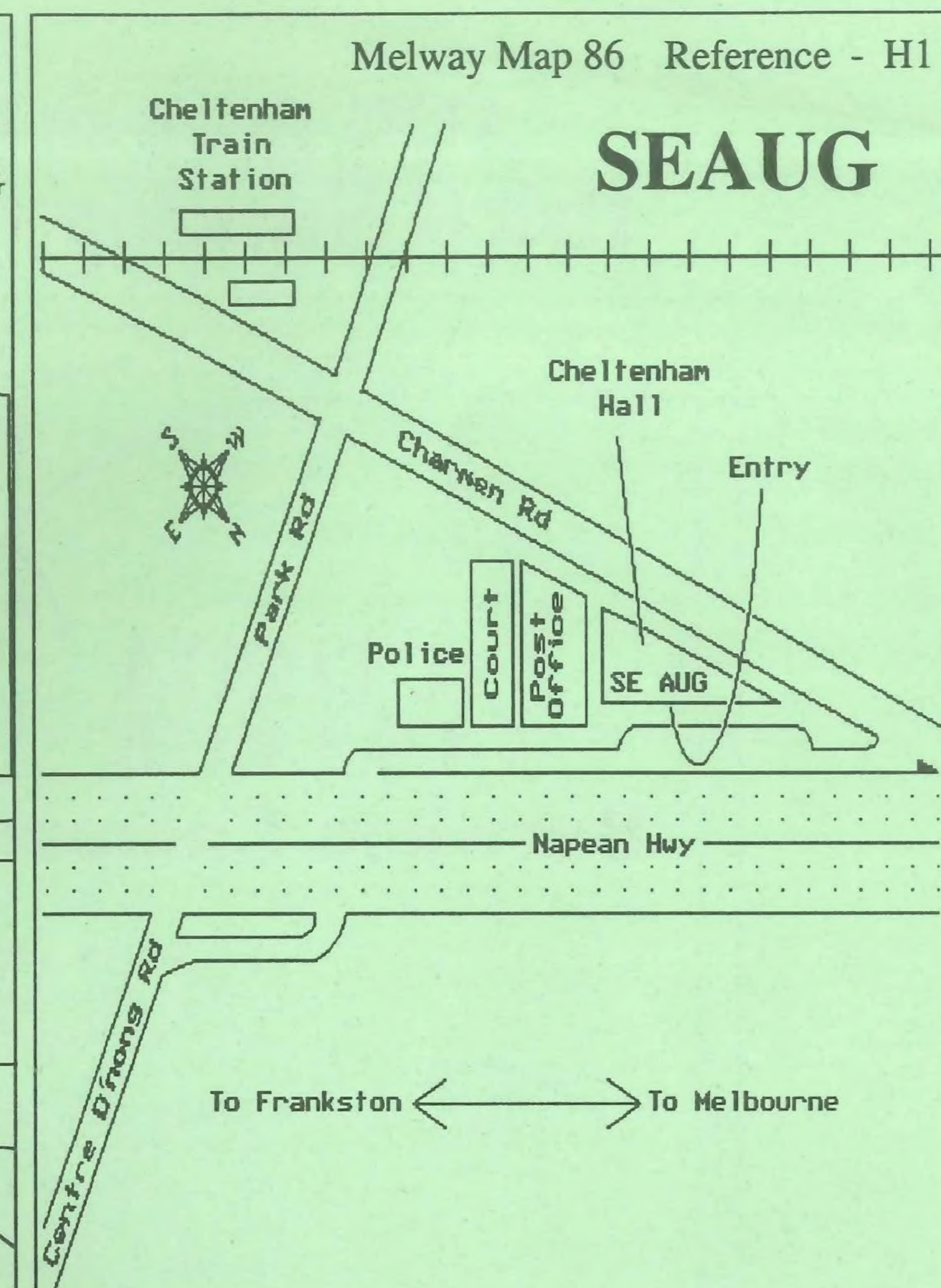
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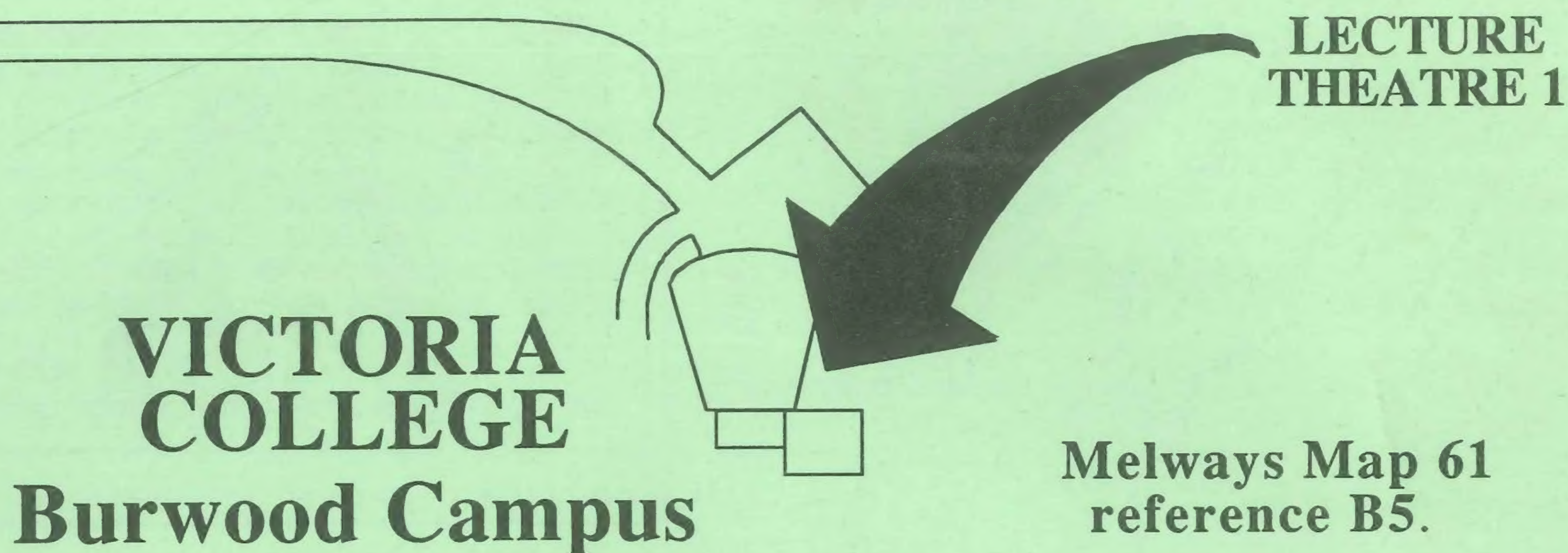
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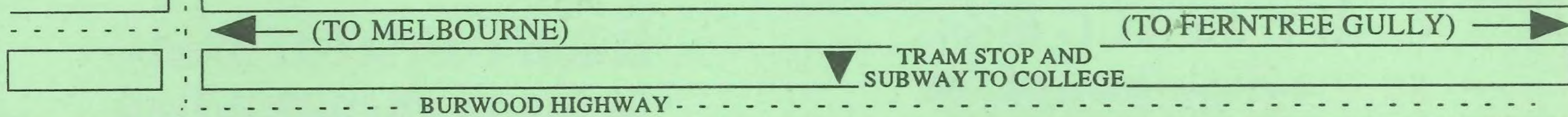
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